



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 201713

TO: Maury Audet
Location: Remsen 3d20 / 3c18
Monday, September 18, 2006
Art Unit: 1654
Phone: 571-272-0960
Serial Number: 10 / 070222

From: Jan Delaval
Location: EIC 1700
Remsen 4a30
Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes

Maury -

Your compounds are structurally unsearchable. I did run a structure search, but the results were irrelevant.

The only good references are applicants' own work: citations numbers 1, 2, and 4 in HCAPlus. See also hits in Registry file, numbers 1, 2, 4-8.

Any questions, please see me.

Jan

=> fil reg

FILE 'REGISTRY' ENTERED AT 15:23:18 ON 18 SEP 2006

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 17 SEP 2006 HIGHEST RN 907180-17-0

DICTIONARY FILE UPDATES: 17 SEP 2006 HIGHEST RN 907180-17-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

Effective September 24, 2006, Concord 3D coordinates will no longer be available. Please contact CAS Customer Care

(<http://www.cas.org/supp.html>) if you have a need for 3D coordinates.

TSCA INFORMATION NOW CURRENT THROUGH June 30, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/ONLINE/UG/regprops.html>

=> d sta que 138

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L4      47 SEA FILE=REGISTRY ABB=ON  PLU=ON  (100-53-8/BI OR 102691-36-1/B
        I OR 108-30-5/BI OR 110556-14-4/BI OR 115520-21-3/BI OR
        143038-41-9/BI OR 294172-31-9/BI OR 294172-32-0/BI OR 294172-33
        -1/BI OR 294172-35-3/BI OR 294172-37-5/BI OR 294172-39-7/BI OR
        294172-40-0/BI OR 294172-41-1/BI OR 294172-42-2/BI OR 294172-43
        -3/BI OR 294172-44-4/BI OR 294172-45-5/BI OR 294172-46-6/BI OR
        294172-47-7/BI OR 294172-48-8/BI OR 294172-49-9/BI OR 294172-50
        -2/BI OR 294900-76-8/BI OR 294900-77-9/BI OR 294900-78-0/BI OR
        294900-79-1/BI OR 294900-80-4/BI OR 295810-35-4/BI OR 295810-36
        -5/BI OR 295810-37-6/BI OR 295810-38-7/BI OR 295810-39-8/BI OR
        295810-40-1/BI OR 295810-41-2/BI OR 329185-90-2/BI OR 329185-91
        -3/BI OR 329185-94-6/BI OR 329185-97-9/BI OR 329186-01-8/BI OR
        329991-05-1/BI OR 329991-06-2/BI OR 50910-54-8/BI OR 5382-16-1/
        BI OR 5961-85-3/BI OR 771-61-9/BI OR 89992-70-1/BI)
L5      26 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 AND S/ELS
L6      21 SEA FILE=REGISTRY ABB=ON  PLU=ON  L4 NOT L5
L7       6 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 AND ?THIO?/CNS
L8       8 SEA FILE=REGISTRY ABB=ON  PLU=ON  L6 AND ?MERCAPT?/CNS
L9      14 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L7 OR L8)
L10     6 SEA FILE=REGISTRY ABB=ON  PLU=ON  L9 AND DIOXO
L13    78555 SEA FILE=REGISTRY ABB=ON  PLU=ON  NUCLEIC?/FS AND (?THIO? OR
        ?MERCAPT?)/CNS
L14     375 SEA FILE=REGISTRY ABB=ON  PLU=ON  L13 AND DIOXO?
L15     230 SEA FILE=REGISTRY ABB=ON  PLU=ON  L14 NOT DIOXO (1W) PYRROLID?
L16     205 SEA FILE=REGISTRY ABB=ON  PLU=ON  L15 NOT DIOXO (2W) (PYRAZOL?
        OR THIOXAN?)
L17     200 SEA FILE=REGISTRY ABB=ON  PLU=ON  L16 NOT DIOXO (1W) PYRROL?
L18     194 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 NOT L10
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L19      35 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND ANTHRACEN?
L20      25 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND NAPHTHAC?
L21     134 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 NOT (L19 OR L20)
L22      18 SEA FILE=REGISTRY ABB=ON  PLU=ON  L21 AND DIOXO(1W) (ETHYL? OR
        PROPYL? OR BUTYL? OR PENTYL? OR HEXYL? OR ETHEN? OR PROPEN? OR
        BUTEN? OR PENTEN? OR HEXEN?)
L23     116 SEA FILE=REGISTRY ABB=ON  PLU=ON  L21 NOT L22
L24       2 SEA FILE=REGISTRY ABB=ON  PLU=ON  L23 AND DIOXO(2W) (ETHYL? OR
        PROPYL? OR BUTYL? OR PENTYL? OR HEXYL? OR ETHEN? OR PROPEN? OR
        BUTEN? OR PENTEN? OR HEXEN?)
L38      86 SEA FILE=REGISTRY ABB=ON  PLU=ON  (L10 OR L19 OR L20 OR L22 OR
        L24)

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=> d his

(FILE 'HCAPLUS' ENTERED AT 14:02:31 ON 18 SEP 2006)

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      DEL HIS
L1       1 S (WO2000-GB3306 OR GB99-20397 OR GB2000-12083)/AP,PRN
      E GAIT/AU
L2     196 S E8,E10-E13
      E STETSENKO/AU
      E STETSENKO D/AU
L3      49 S E3-E9
      SEL RN LA
      DEL SEL
      SEL RN L1

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FILE 'REGISTRY' ENTERED AT 14:03:57 ON 18 SEP 2006

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L4       47 S E1-E47
L5       26 S L4 AND S/ELS
L6       21 S L4 NOT L5
L7        6 S L6 AND ?THIO?/CNS
L8        8 S L6 AND ?MERCAPT?/CNS
L9       14 S L7,L8
L10      6 S L9 AND DIOXO
L11      STR
L12     50 S L11
L13    78555 S NUCLEIC?/FS AND (?THIO? OR ?MERCAPT?)/CNS
L14     375 S L13 AND DIOXO?
L15     230 S L14 NOT DIOXO (1W) PYRROLID?
L16     205 S L15 NOT DIOXO (2W) (PYRAZOL? OR THIOXAN?)
L17     200 S L16 NOT DIOXO (1W) PYRROL?
L18     194 S L17 NOT L10
L19      35 S L18 AND ANTHRACEN?
L20      25 S L18 AND NAPHTHAC?
L21     134 S L18 NOT L19,L20
L22      18 S L21 AND DIOXO(1W) (ETHYL? OR PROPYL? OR BUTYL? OR PENTYL? OR H
L23     116 S L21 NOT L22
L24       2 S L23 AND DIOXO(2W) (ETHYL? OR PROPYL? OR BUTYL? OR PENTYL? OR H
L25     114 S L23 NOT L24
L26      STR L11
L27     50 S L26
L28    35593 S L26 FUL
L29       1 S L28 AND NUCLEIC?/FS
L30    31240 S L28 AND PROTEIN?/FS
L31     4352 S L28 NOT L29,L30
L32      STR L26
L33      13 S L32 SAM SUB=L28
L34     199 S L32 FUL SUB=L28

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      SAV TEMP L28 AUDET070/A
      SAV L34 AUDET070A/A
L35      14 S L34 AND L30
L36      3 S L34 AND P/ELS
L37      0 S L36 AND L35
L38      86 S L10,L19,L20,L22,L24

      FILE 'HCAPLUS' ENTERED AT 15:08:34 ON 18 SEP 2006
L39      24 S L38
L40      3 S L39 AND L1-L3
L41      49 S L25
L42      0 S L1-L3 AND L41
L43      11 S L39 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
L44      31 S L41 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
      E OLIGONUCLEOTIDE/CT
L45      18 S E8+OLD,NT,RT AND L39
L46      27 S E8+OLD,NT,RT AND L41
      E SOLID PHASE SYNTHESIS/CT
L47      3 S E3+OLD,NT,RT AND L39
L48      3 S E3+OLD,NT,RT AND L41
      E PEPTIDE COUPLING/CT
L49      4 S E3+OLD,NT,RT AND L39
L50      7 S E3+OLD,NT,RT AND L41
L51      3 S L40 AND L43,L45,L47,L49
L52      10 S L43 AND L45,L47,L49
L53      9 S L52 NOT L51
L54      1 S L43 NOT L51,L53
L55      13 S L51-L54
L56      30 S L46,L48,L50
L57      40 S L44,L56
L58      9 S L57 AND PEPTIDE
L59      3 S L57 AND HYBRID
L60      10 S L58,L59
      SEL HIT RN
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      FILE 'REGISTRY' ENTERED AT 15:19:24 ON 18 SEP 2006
L61      14 S E1-E14
L62      1 S 229016-44-8 AND L61
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      FILE 'HCAPLUS' ENTERED AT 15:22:55 ON 18 SEP 2006
L63      1 S L62
L64      14 S L55,L63
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      FILE 'REGISTRY' ENTERED AT 15:23:18 ON 18 SEP 2006
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=> fil hcaplus
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FILE 'HCAPLUS' ENTERED AT 15:23:39 ON 18 SEP 2006
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FILE COVERS 1907 - 18 Sep 2006 VOL 145 ISS 13
FILE LAST UPDATED: 17 Sep 2006 (20060917/ED)

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This file contains CAS Registry Numbers for easy and accurate
substance identification.

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L64 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 2002:46822 HCAPLUS
DN 137:20554
ED Entered STN: 18 Jan 2002
TI Fragment coupling approaches to the synthesis of peptide-oligonucleotide
conjugates
AU **Stetsenko, Dmitri A.; Gait, Michael J.**
CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, CB2
2QH, UK
SO Innovation and Perspectives in Solid Phase Synthesis & Combinatorial
Libraries: Peptides, Proteins and Nucleic Acids--Small Molecule Organic
Chemistry Diversity, Collected Papers, International Symposium, 6th, York,
United Kingdom, Aug. 31-Sept. 4, 1999 (2001), Meeting Date 1999, 79-86.
Editor(s): Epton, Roger. Publisher: Mayflower Scientific Ltd.,
Kingswinford, UK.
CODEN: 69CEGV; ISBN: 0-9515735-3-5
DT Conference; General Review
LA English
CC 34-0 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 33
AB A review. A solid phase fragment coupling strategy for
peptide-oligonucleotide conjugate synthesis involves assembling the
oligonucleotide and peptide moieties sep. on their own supports. The
peptide fragment is removed from its support and purified prior to
conjugation. Conjugation at the C-terminus of the N α -Fmoc-protected
peptide fragment to supported 5'-primary amino group-functionalized
oligonucleotide was evaluated under various reaction conditions.
ST review peptide oligonucleotide conjugate fragment coupling solid phase
synthesis
IT **Peptides, preparation**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(oligonucleotide conjugates; fragment coupling approaches to synthesis
of peptide-oligonucleotide conjugates)
IT **Solid phase synthesis**
(oligonucleotide; fragment coupling approaches to synthesis of
peptide-oligonucleotide conjugates)
IT **Oligonucleotides**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(peptide conjugates; fragment coupling approaches to synthesis of
peptide-oligonucleotide conjugates)
IT **Solid phase synthesis**
(peptide; fragment coupling approaches to synthesis of
peptide-oligonucleotide conjugates)
IT **435230-07-2P**
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(fragment coupling approaches to synthesis of peptide-oligonucleotide
conjugates)
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Arar, K; Bioconj Chem 1995, V6, P573 HCAPLUS
- (2) Bachmann, A; J Mol Med 1998, V76, P126 HCAPLUS
- (3) Basu, S; Tetrahedron Lett 1995, V36, P4943 HCAPLUS
- (4) Bennett, C; Mol Pharmacol 1992, V41, P1023 HCAPLUS
- (5) Bergmann, F; Tetrahedron Lett 1995, V36, P1839 HCAPLUS
- (6) Bongartz, J; Nucl Acids Res 1994, V22, P4681 HCAPLUS
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- (10) Chaloin, L; Biochem Biophys Res Comm 1998, V243, P601 HCAPLUS
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- (31) Pichon, C; Mol Pharmacol 1997, V51, P431 HCAPLUS
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- (34) Tetzlaff, C; Tetrahedron Lett 1998, V39, P4215 HCAPLUS
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- (38) Vives, E; Tetrahedron Lett 1997, V38, P1183 HCAPLUS
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- (40) Wilken, J; Curr Opinion Biotech 1998, V9, P412 HCAPLUS
- (41) Wyman, T; Biochemistry 1997, V36, P3008 HCAPLUS
- (42) Zamecnik, P; Proc Natl Acad Sci USA 1978, V75, P280 HCAPLUS

L64 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 2001:167843 HCAPLUS
 DN 134:237835
 ED Entered STN: 09 Mar 2001
 TI Method for coupling molecules such as peptides and oligonucleotides
 IN **Gait, Michael John; Stetsenko, Dmitry**
 PA Medical Research Council, UK
 SO PCT Int. Appl., 39 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K0047-48
 CC 34-3 (Amino Acids, Peptides, and Proteins)
 Section cross-reference(s): 33
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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jan delaval - 18 september 2006

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PI  WO 2001015737      A2      20010308      WO 2000-GB3306      20000825 <--
    WO 2001015737      A3      20011115
      W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
        CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
        HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
        LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
        SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
        YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
      RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
        DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
        CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
    CA 2382499          AA      20010308      CA 2000-2382499      20000825 <--
    EP 1207909          A2      20020529      EP 2000-956666      20000825 <--
      R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
        IE, SI, LT, LV, FI, RO, MK, CY, AL
    JP 2003508450      T2      20030304      JP 2001-520148      20000825 <--
PRAI GB 1999-20397      A      19990827      <--
    GB 2000-12083      A      20000518      <--
    WO 2000-GB3306      W      20000825      <--

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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001015737	ICM	A61K0047-48
	IPCI	A61K0047-48 [ICM,7]
	IPCR	A61K0047-48 [I,A]; A61K0047-48 [I,C*]
	ECLA	A61K047/48R4
CA 2382499	IPCI	A61K0047-48 [ICM,7]
EP 1207909	IPCI	A61K0047-48 [ICM,6]
	IPCR	A61K0047-48 [I,A]; A61K0047-48 [I,C*]
JP 2003508450	IPCI	C07K0001-00 [ICM,7]; A61K0031-7088 [ICS,7]; A61K0047-48 [ICS,7]; A61K0048-00 [ICS,7]; A61P0043-00 [ICS,7]; C07K0007-00 [ICS,7]; C07K0014-00 [ICS,7]
	IPCR	A61K0047-48 [I,A]; A61K0047-48 [I,C*]

OS MARPAT 134:237835

AB A method is given for linking a first mol. M1-NH2 with a second mol. M2-OH which comprises reaction of a compound of formula M1-NHCO-A-C(O)SR1 (M1 is the residue of a mol. bearing an amino group, A is an alkylene or arylene group, R1 is alkyl or aryl) with a compound of formula M2-O-B(D-SR2)NH2 (M2 is the residue of a mol. bearing a hydroxy group, B is a linker, D is C1-4 alkylene or C3-12 arylene, R2 is H or a thiol protecting group). In addition, this invention relates to conjugate products of the coupling reaction, reagents for modifying M1-NH2 and M2-OH, and kits comprising these reagents. Thus, coupling reagents pentafluorophenyl S-benzyl thiosuccinate and 4-N- α -Fmoc-S-tert-butylsulfenyl-L-cysteinylpiperidyl 2-cyanoethyl N,N-diisopropylphosphoramidite were prepared and applied to the automated solid phase synthesis of peptide N-terminal S-benzyl thioesters and 5'-cysteinyl oligonucleotides and solution-phase synthesis of peptide-N-5'-oligonucleotide conjugates.

ST coupling method peptide oligonucleotide prepn

IT **Peptide coupling**

(method for coupling mols. such as peptides and oligonucleotides)

IT **Oligonucleotides****Peptides, preparation**

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(method for coupling mols. such as peptides and oligonucleotides)

IT 100-53-8, Benzyl mercaptan 108-30-5, Succinic anhydride, reactions
 771-61-9, Pentafluorophenol 5382-16-1, 4-Hydroxypiperidine 5961-85-3,
 Tris(2-carboxyethyl)phosphine 50910-54-8, trans-4-Aminocyclohexanol

hydrochloride 89992-70-1 102691-36-1 115520-21-3 143038-41-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(method for coupling mols. such as peptides and oligonucleotides)

IT 110556-14-4P 294172-31-9P 294172-32-0P 294172-33-1P 294172-35-3P
 294172-37-5P 294172-39-7P 329185-90-2P 329185-91-3P 329185-94-6P
 329185-97-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(method for coupling mols. such as peptides and oligonucleotides)

IT 294172-40-0P 294172-41-1P 294172-42-2P 294172-43-3P 294172-44-4P
 294172-45-5P 294172-46-6P 294172-47-7P 294172-48-8P 294172-49-9P
 294172-50-2P 294900-76-8P 294900-77-9P 294900-78-0P

294900-79-1P 294900-80-4P 295810-35-4P 295810-36-5P**295810-37-6P 295810-38-7P 295810-39-8P 295810-40-1P****295810-41-2P 329186-01-8P 329991-05-1P**

329991-06-2DP, fluorescein bound

RL: SPN (Synthetic preparation); PREP (Preparation)

(method for coupling mols. such as peptides and oligonucleotides)

L64 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2000:838129 HCAPLUS

DN 134:5118

ED Entered STN: 30 Nov 2000

TI Derivatized oligonucleotides having improved uptake and other properties

IN Manoharan, Muthiah; Cook, Phillip Dan; Bennett, Clarence Frank

PA ISIS Pharmaceuticals, Inc., USA

SO U.S., 25 pp., Cont.-in-part of U.S. Ser. No. 782,374, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC C07H0019-00; C07H0021-00; C12Q0001-68; A01N0043-04

INCL 536022100

CC 33-10 (Carbohydrates)

Section cross-reference(s): 6

FAN.CNT 322

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6153737	A	20001128	US 1994-211882	19940422 <--
	WO 9110671	A1	19910725	WO 1991-US243	19910111 <--
	W: AU, BR, CA, FI, HU, JP, KR, NO, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
EP	1418179	A2	20040512	EP 2003-78862	19910111 <--
EP	1418179	A3	20060308		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
CA	2089376	AA	19920214	CA 1991-2089376	19910812 <--
EP	1443051	A2	20040804	EP 2004-76246	19910812 <--
EP	1443051	A3	20050817		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE				
AT	318273	E	20060315	AT 1991-915355	19910812 <--
WO	9307883	A1	19930429	WO 1992-US9196	19921023 <--
	W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, PL, RO, RU, US				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, SN, TD, TG				
EP	1331011	A2	20030730	EP 2003-76286	19921023 <--
EP	1331011	A3	20031217		
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US	5578718	A	19961126	US 1993-116801	19930903 <--
JP	08098700	A2	19960416	JP 1995-175173	19950711 <--
JP	3585583	B2	20041104		

AU 9726244	A1	19971106	AU 1997-26244	19970624 <--
AU 713740	B2	19991209		
US 6232463	B1	20010515	US 1998-128508	19980804 <--
US 6265558	B1	20010724	US 1999-383856	19990826 <--
US 6395492	B1	20020528	US 2000-633659	20000807 <--
US 2002177150	A1	20021128	US 2002-73718	20020211 <--
US 2003064492	A1	20030403	US 2002-154993	20020523 <--
US 6919439	B2	20050719		
US 2003175751	A1	20030918	US 2002-284742	20021031 <--
US 2005043219	A1	20050224	US 2004-755166	20040109 <--
US 2005158727	A1	20050721	US 2004-755109	20040109 <--
PRAI US 1990-463358	B2	19900111	<--	
US 1990-566977	B2	19900813	<--	
WO 1991-US243	A2	19910111	<--	
US 1991-782374	B2	19911024	<--	
WO 1992-US9196	W	19921023	<--	
EP 1991-903066	A3	19910111	<--	
EP 1991-915355	A3	19910812	<--	
EP 1992-923139	A3	19921023	<--	
AU 1993-38025	A3	19930225	<--	
US 1993-116801	A2	19930903	<--	
US 1994-211882	A2	19940422	<--	
US 1995-458396	A1	19950602	<--	
US 1997-924326	A1	19970905	<--	
US 1997-948151	A1	19971009	<--	
US 2000-633659	A3	20000807		
US 2002-73718	A1	20020211		
US 2002-154993	A1	20020523		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 6153737	IC	C07H0019-00; C07H0021-00; C12Q0001-68; A01N0043-04
	INCL	536022100
	IPCI	C07H0019-00 [ICM]; C07H0021-00 [ICS]; C12Q0001-68 [ICS]; A01N0043-04 [ICS]; A01N0043-02 [ICS,C*]
	IPCR	A01N0043-02 [I,C*]; A01N0043-04 [I,A]; C07H0019-00 [I,A]; C07H0019-00 [I,C*]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
	NCL	536/022.100; 435/006.000; 536/023.100; 536/025.300; 536/025.320; 536/026.600
WO 9110671	IPCI	C07H0001-00 [ICM]; A61K0031-70 [ICS]; C12Q0001-68 [ICS]
	IPCR	A61K0038-00 [N,A]; A61K0038-00 [N,C*]; A61K0048-00 [I,A]; A61K0048-00 [I,C*]; C07H0019-00 [I,C*]; C07H0019-04 [I,A]; C07H0019-06 [I,A]; C07H0019-10 [I,A]; C07H0019-16 [I,A]; C07H0019-20 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]; C07J0043-00 [I,A]; C07J0043-00 [I,C*]; C07K0014-005 [I,C*]; C07K0014-16 [I,A]; C12N0009-02 [I,A]; C12N0009-02 [I,C*]; C12N0015-11 [I,A]; C12N0015-11 [I,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
EP 1418179	IPCI	C07H0021-00 [I,A]; C07H0019-04 [I,A]; C07H0019-14 [I,A]; C07H0019-06 [I,A]; C07H0019-16 [I,A]; A61K0031-70 [I,A]; C12Q0001-68 [I,A]; C07H0019-052 [I,A]; C07H0019-12 [I,A]; C07H0019-22 [I,A]; C07H0019-23 [I,A]; C07H0019-00 [I,C*]; A61K0031-7052 [I,A]; A61K0031-7042 [I,C*]
	ECLA	C07H019/04; C07H019/06; C07H019/06E; C07H019/10E; C07H019/16E; C07H019/20; C07H021/00; C07H021/00C2;

		C07H021/00C4; C07H021/00G; C07H021/00H; C07H023/00D; C07J043/00B
CA 2089376	IPCR	A61K0038-00 [N,A]; A61K0038-00 [N,C*]; A61K0048-00 [N,A]; A61K0048-00 [N,C*]; C07H0019-00 [I,C*]; C07H0019-04 [I,A]; C07H0019-06 [I,A]; C07H0019-10 [I,A]; C07H0019-16 [I,A]; C07H0019-20 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]; C07J0043-00 [I,A]; C07J0043-00 [I,C*]; C12N0009-02 [I,A]; C12N0009-02 [I,C*]; C12N0015-11 [I,A]; C12N0015-11 [I,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
EP 1443051	IPCI	C07H0021-00 [ICM,7]; A61K0031-70 [ICS,7]; C07H0019-16 [ICS,7]; C07H0019-00 [ICS,7,C*]; C12P0021-06 [ICS,7]
	ECLA	A61K031/70; C07H019/16; C07H021/00; C12N015/11B
AT 318273	IPCI	C07H0021-00 [ICS,7]; A61K0031-70 [ICS,7]; C07H0019-16 [ICS,7]; C07H0019-00 [ICS,7,C*]
	IPCR	A61K0038-00 [N,C*]; A61K0048-00 [N,C*]; C07H0019-00 [I,C*]; C07H0021-00 [I,C*]; C07H0023-00 [I,C*]; C07J0043-00 [I,C*]; C12N0009-02 [I,C*]; C12N0015-11 [I,C*]; C12Q0001-68 [I,C*]; A61K0038-00 [N,A]; A61K0048-00 [N,A]; C07H0019-04 [I,A]; C07H0019-06 [I,A]; C07H0019-10 [I,A]; C07H0019-16 [I,A]; C07H0019-20 [I,A]; C07H0021-00 [I,A]; C07H0023-00 [I,A]; C07J0043-00 [I,A]; C12N0009-02 [I,A]; C12N0015-11 [I,A]; C12Q0001-68 [I,A]
	ECLA	C07H019/04; C07H019/06; C07H019/06E; C07H019/10E; C07H019/16E; C07H019/20; C07H021/00; C07H021/00C2; C07H021/00C4; C07H021/00G; C07H021/00H; C07H023/00D; C07J043/00B; C12N009/02K; C12N015/11B; C12N015/11B5; C12Q001/68
WO 9307883	IPCI	A61K0031-70 [ICM,5]; C07H0021-00 [ICS,5]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]; C07J0043-00 [I,A]; C07J0043-00 [I,C*]; C07J0051-00 [I,A]; C07J0051-00 [I,C*]
EP 1331011	IPCI	A61K0047-48 [ICM,7]
	ECLA	C07H021/00C4; C07H021/00G; C07H021/00H; C07J043/00B; C07J051/00
US 5578718	IPCI	C07H0019-06 [ICM,6]; C07H0019-16 [ICS,6]; C07H0019-00 [ICS,6,C*]; C07H0021-00 [ICS,6]
	IPCR	A61K0038-00 [N,A]; A61K0038-00 [N,C*]; A61K0048-00 [N,A]; A61K0048-00 [N,C*]; C07H0019-00 [I,C*]; C07H0019-04 [I,A]; C07H0019-06 [I,A]; C07H0019-10 [I,A]; C07H0019-16 [I,A]; C07H0019-20 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]; C07J0043-00 [I,A]; C07J0043-00 [I,C*]; C07J0051-00 [I,A]; C07J0051-00 [I,C*]; C12N0009-02 [I,A]; C12N0009-02 [I,C*]; C12N0015-11 [I,A]; C12N0015-11 [I,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
	NCL	536/027.210; 536/027.600; 536/027.800; 536/027.810; 536/028.100; 536/028.400; 536/028.500; 536/028.530; 536/028.540; 536/055.300
	ECLA	C07H019/04; C07H019/06; C07H019/06E; C07H019/10E; C07H019/16E; C07H019/20; C07H021/00; C07H021/00C2; C07H021/00C4; C07H021/00F; C07H021/00G; C07H021/00H; C07H023/00D; C07J043/00B; C07J051/00; C12N009/02K; C12N015/11B; C12N015/11B5; C12Q001/68
JP 08098700	IPCI	C12Q0001-68 [ICM,6]; A61K0031-70 [ICS,6]; C07H0021-04 [ICS,6]; C07H0021-00 [ICS,6,C*]; C12N0015-09 [ICS,6]

AU 9726244 IPCI C12N0015-11 [ICM,6]; A61K0031-70 [ICS,6]; A61K0048-00 [ICS,6]
 IPCR A61K0031-70 [I,A]; A61K0031-70 [I,C*]; A61K0048-00 [I,A]; A61K0048-00 [I,C*]; C12N0015-11 [I,A]; C12N0015-11 [I,C*]

US 6232463 IPCI C07H0021-02 [ICM,7]; C07H0021-00 [ICM,7,C*]
 IPCR C07H0019-00 [I,C*]; C07H0019-16 [I,A]; C07H0019-20 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 NCL 536/025.300; 536/025.310; 536/025.320; 536/025.330; 536/025.340; 544/264.000
 ECLA C07H019/16E; C07H019/20; C07H021/00C4

US 6265558 IPCI C07H0021-02 [ICM]; C07H0021-04 [ICS]; C07H0021-00 [ICS,C*]
 IPCR C07H0021-00 [I,C*]; C07H0021-02 [I,A]; C07H0021-04 [I,A]
 NCL 536/023.100; 536/022.100; 536/024.310; 536/025.300; 536/025.320; 536/027.600; 536/027.800; 536/027.810; 536/028.100; 536/028.400; 536/028.500

US 6395492 IPCI C12Q0001-68 [ICM]; C07H0019-00 [ICS]; C07H0021-00 [ICS]; A01N0043-04 [ICS]; A01N0043-02 [ICS,C*]
 IPCR A61K0038-00 [N,A]; A61K0038-00 [N,C*]; A61K0048-00 [N,A]; A61K0048-00 [N,C*]; C07H0019-00 [I,C*]; C07H0019-04 [I,A]; C07H0019-06 [I,A]; C07H0019-10 [I,A]; C07H0019-16 [I,A]; C07H0019-20 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]; C07J0043-00 [I,A]; C07J0043-00 [I,C*]; C07J0051-00 [I,A]; C07J0051-00 [I,C*]; C12N0009-02 [I,A]; C12N0009-02 [I,C*]; C12N0015-11 [I,A]; C12N0015-11 [I,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
 NCL 435/006.000; 514/044.000; 536/022.100; 536/023.100
 ECLA C07H019/04; C07H019/06; C07H019/06E; C07H019/10E; C07H019/16E; C07H019/20; C07H021/00; C07H021/00C4; C07H021/00C2; C07H021/00F; C07H021/00G; C07H021/00H; C07H023/00D; C07J043/00B; C07J051/00; C12N009/02K; C12N015/11B; C12N015/11B5; C12Q001/68

US 2002177150 IPCI C12Q0001-68 [ICM]; C07J0001-00 [ICS]; C07H0021-04 [ICS]; C07H0021-00 [ICS,C*]; C12N0009-00 [ICS]
 IPCR H04L0012-42 [I,A]; H04L0012-42 [I,C*]; H04L0012-46 [I,A]; H04L0012-46 [I,C*]; H04L0012-56 [I,A]; H04L0012-56 [I,C*]; H04Q0011-04 [N,A]; H04Q0011-04 [N,C*]
 NCL 435/006.000; 435/183.000; 514/044.000; 536/005.000; 536/023.100
 ECLA H04L012/42; H04L012/46; H04L012/56C

US 2003064492 IPCI C12Q0001-68 [ICM,7]; C07J0001-00 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]; C12N0009-00 [ICS,7]; C07K0009-00 [ICS,7]
 IPCR A01N0043-02 [I,C*]; A01N0043-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0021-02 [I,A]; C07H0021-04 [I,A]; C07J0001-00 [I,A]; C07J0001-00 [I,C*]; C07K0009-00 [I,A]; C07K0009-00 [I,C*]; C12N0009-00 [I,A]; C12N0009-00 [I,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
 NCL 435/183.000; 435/006.000; 530/395.000; 536/005.000; 536/023.100

US 2003175751 IPCI C12Q0001-68 [ICM,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]
 IPCR C07H0021-00 [I,C*]; C07H0021-04 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]

US 2005043219 NCL 435/006.000; 536/023.100
 IPCI C12Q0001-68 [ICM,7]; A61K0038-16 [ICS,7]; A61K0048-00 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]
 IPCR A61K0038-16 [I,A]; A61K0038-16 [I,C*]; A61K0048-00 [I,A]; A61K0048-00 [I,C*]; C07H0021-00 [I,C*]; C07H0021-04 [I,A]; C07J0017-00 [I,A]; C07J0017-00 [I,C*]; C07K0014-435 [I,C*]; C07K0014-47 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
 NCL 514/007.000; 435/006.000; 514/026.000; 514/044.000; 530/352.000; 536/006.100; 536/023.100
 US 2005158727 IPCI C12Q0001-68 [ICM,7]; C07J0017-00 [ICS,7]; C07H0021-04 [ICS,7]; C07H0021-00 [ICS,7,C*]; C07K0014-47 [ICS,7]; C07K0014-435 [ICS,7,C*]
 IPCR A61K0038-16 [I,A]; A61K0038-16 [I,C*]; A61K0048-00 [I,A]; A61K0048-00 [I,C*]; C07H0021-00 [I,C*]; C07H0021-04 [I,A]; C07J0017-00 [I,A]; C07J0017-00 [I,C*]; C07K0014-435 [I,C*]; C07K0014-47 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
 NCL 435/006.000; 530/352.000; 536/006.100; 536/024.300; 536/025.320
 AB Linked nucleosides having at least one functionalized nucleoside that bears a substituent such as a steroid mol., a reporter mol., a non-aromatic lipophilic mol., a reporter enzyme, a peptide, a protein, a water soluble vitamin, a lipid soluble vitamin, an RNA cleaving complex, a metal chelator, a porphyrin, an alkylator, a pyrene, a hybrid photo-nuclease/intercalator, or an aryl azide photo-crosslinking agent exhibit increased cellular uptake and other properties. The substituent can be attached at the 2'-position of the functionalized nucleoside via a linking group. If at least a portion of the remaining linked nucleosides are 2'-deoxy-2'-fluoro, 2'-O-methoxy, 2'-O-ethoxy, 2'-O-propoxy, 2'-O-aminoalkoxy or 2'-O-allyloxy nucleosides, the substituent can be attached via a linking group at any of the 3' or the 5' positions of the nucleoside or on the heterocyclic base of the nucleoside or on the inter-nucleotide linkage linking the nucleoside to an adjacent nucleoside.
 ST cellular uptake functionalized oligonucleotide prepn; oligonucleotide functionalized cholic acid prepn
 IT Cell adhesion molecules
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (ICAM-1 (intercellular adhesion mol. 1); preparation of derivatized oligonucleotides having improved uptake and other properties)
 IT Crosslinking
 (preparation of derivatized oligonucleotides having improved uptake and other properties)
 IT **Oligodeoxyribonucleotides**
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of derivatized oligonucleotides having improved uptake and other properties)
 IT Biological transport
 (uptake; preparation of derivatized oligonucleotides having improved uptake and other properties)
 IT 154654-57-6P 154654-59-8P 154655-22-8P 307351-21-9P
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of derivatized oligonucleotides having improved uptake and other properties)

IT 17407-37-3P 147482-95-9DP, mono substituted 2'-O-pentylamine adenosine and 2'-O-pentylamino biotin derivs. 147482-95-9DP, mono substituted 2'-O-pentylamine and 2'-O-pentylamino fluorescein isothiocyanate derivs.
 154654-63-4P 154654-64-5P 154654-80-5P 154654-88-3P 154654-90-7P
 154654-92-9P 154655-00-2P 154655-04-6P 154655-07-9P 154655-09-1P
 154655-10-4P 154655-19-3P 307997-67-7P 307997-68-8P 307997-69-9P
 307997-70-2P 307997-71-3P 307997-72-4P 307997-73-5P 307997-74-6P
 307997-75-7P 308147-42-4P 308147-43-5P 308147-44-6P 308147-45-7P
 308147-46-8P 308147-50-4P 308147-51-5P 308147-52-6P 308147-53-7P
 308147-56-0P 308147-57-1P **308147-58-2P** 308147-63-9P
 308147-64-0P 308147-67-3P 308147-68-4P 308147-69-5P 308147-70-8P
 308147-72-0P 308147-73-1P 308147-75-3P 308147-76-4P 308147-78-6P
 308147-79-7P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of derivatized oligonucleotides having improved uptake and other properties)

IT 53-06-5, Cortisone 57-88-5, Cholesterol, reactions 58-22-0, Testosterone 58-96-8, Uridine 81-23-2, Dehydrocholic acid 81-25-4, Cholic acid 83-44-3, Deoxycholic acid 302-79-4, Retinoic acid 954-81-4, N-(5-Bromopentyl)phthalimide 1672-46-4, Digoxigenin 1892-57-5, EDAC 6066-82-6, N-Hydroxysuccinimide 7620-46-4 13400-13-0, Cesium fluoride 27072-45-3, Fluorescein isothiocyanate 42922-78-1, Fluorescein isocyanate 53053-08-0, N-Hydroxysuccinimidyl-4-azidobenzoate 64309-05-3 114932-60-4 129273-26-3 133975-85-6 146818-48-6 308147-65-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of derivatized oligonucleotides having improved uptake and other properties)

IT 42822-78-6P 65646-64-2P 70090-26-5P 154042-65-6P 154042-66-7P 307351-19-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of derivatized oligonucleotides having improved uptake and other properties)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

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AN 2000:554717 HCAPLUS

DN 133:252734

ED Entered STN: 13 Aug 2000

TI Efficient Conjugation of Peptides to Oligonucleotides by "Native Ligation"

AU **Stetsenko, Dmitry A.; Gait, Michael J.**

CS Laboratory of Molecular Biology, Medical Research Council, Cambridge, CB2 2QH, UK

SO Journal of Organic Chemistry (2000), 65(16), 4900-4908

CODEN: JOCEAH; ISSN: 0022-3263

PB American Chemical Society

DT Journal

LA English

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 6, 33

OS CASREACT 133:252734

AB A new strategy has been developed for conjugation of peptides to oligonucleotides. The method is based on the "native ligation" of an N-terminal thioester-functionalized peptide to a 5'-cysteinyl oligonucleotide. Two new reagents were synthesized for use in solid-phase peptide and oligonucleotide synthesis, resp. Pentafluorophenyl S-benzylthiosuccinate was used in the final coupling step in standard Fmoc-based solid-phase peptide assembly. Deprotection with trifluoroacetic acid generated in solution peptides substituted with an N-terminal S-benzylthiosuccinyl moiety. O-trans-4-(N- α -Fmoc-S-tert-butylsulphenyl-L-cysteinyl)aminocyclohexyl O-2-cyanoethyl-N,N-diisopropylphosphoramidite was used in the final coupling step in standard phosphoramidite solid-phase oligonucleotide assembly. Deprotection with aqueous ammonia solution generated in solution 5'-S-tert-butylsulphenyl-L-cysteinyl functionalized oligonucleotides. Functionalized peptides and oligonucleotides were used without purification in native ligation conjugation reactions in aqueous/organic solution using tris-(2-carboxyethyl)phosphine to

remove

the tert-butylsulphenyl group in situ and thiophenol as a conjugation enhancer. A range of peptide-oligonucleotide conjugates were prepared by this route and purified by reversed-phase HPLC.

ST peptide oligonucleotide conjugate prepn coupling solid phase

IT **Peptide coupling**

Solid phase synthesis

(preparation of peptide-oligonucleotide conjugates by native ligation techniques)

IT **Oligonucleotides**

Peptides, preparation

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of peptide-oligonucleotide conjugates by native ligation techniques)

IT 100-53-8, Benzyl mercaptan 108-30-5, Succinic anhydride, reactions
771-61-9, Pentafluorophenol 50910-54-8 115520-21-3 143038-41-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of peptide-oligonucleotide conjugates by native ligation techniques)

IT 110556-14-4P 294172-31-9P 294172-32-0P 294172-33-1P 294172-35-3P
294172-37-5P 294172-39-7P 294172-40-0P 294172-41-1P 294172-42-2P
294172-43-3P 294172-44-4P 294172-45-5P 294172-46-6P 294172-47-7P
294172-48-8P 294172-49-9P 294900-76-8P 294900-77-9P 294900-78-0P
295810-35-4P 295810-36-5P 295810-37-6P 295810-38-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of peptide-oligonucleotide conjugates by native ligation techniques)

IT 294172-50-2P 294900-79-1P 294900-80-4P
295810-39-8P 295810-40-1P 295810-41-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of peptide-oligonucleotide conjugates by native ligation techniques)

RE.CNT 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD

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L64 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1999:427507 HCAPLUS

DN 131:69262

ED Entered STN: 12 Jul 1999

TI Method for electrochemical detection of sequence-specific nucleic acid-oligomer hybridization

IN Hartwich, Gerhard

PA Germany

SO Ger. Offen., 28 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C12N0015-11

ICS C12Q0001-68; C07H0021-00; G01N0027-26

CC 3-1 (Biochemical Genetics)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19901761	A1	19990701	DE 1999-19901761	19990118
	DE 19926457	A1	20000727	DE 1999-19926457	19990429
	CA 2371938	AA	20000720	CA 2000-2371938	20000107
	WO 2000042217	A2	20000720	WO 2000-EP84	20000107
	WO 2000042217	A3	20001130		
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	EP 1144685	B1	20030423		
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	TR 200101930	T2	20020621	TR 2001-1930	20000107
	AU 758063	B2	20030313	AU 2000-26627	20000107
	AT 238436	E	20030515	AT 2000-904884	20000107
	JP 2003521465	T2	20030715	JP 2000-593774	20000107
	ES 2198282	T3	20040201	ES 2000-904884	20000107
	ZA 2001005097	A	20020219	ZA 2001-5097	20010621
	NO 2001003471	A	20010913	NO 2001-3471	20010713
PRAI	DE 1999-19901761	A1	19990118		
	DE 1999-19926457	A	19990429		

WO 2000-EP84	W	20000107
CLASS		
PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19901761	ICM	C12N0015-11
	ICS	C12Q0001-68; C07H0021-00; G01N0027-26
	IPCI	C12N0015-11 [ICM, 6]; C12Q0001-68 [ICS, 6]; C07H0021-00 [ICS, 6]; G01N0027-26 [ICS, 6]
	IPCR	C07H0021-00 [I, A]; C07H0021-00 [I, C*]; C12N0015-11 [I, A]; C12N0015-11 [I, C*]; C12Q [I, S]; C12Q0001-68 [I, A]; C12Q0001-68 [I, C*]; G01N0027-26 [I, A]; G01N0027-26 [I, C*]
DE 19926457	ECLA	C12Q001/68B2H+565/607+565/519+523/319
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	IPCR	C07H0021-00 [I, A]; C07H0021-00 [I, C*]; C12N0015-11 [I, A]; C12N0015-11 [I, C*]; C12Q [I, S]; C12Q0001-68 [I, A]; C12Q0001-68 [I, C*]; G01N0027-26 [I, A]; G01N0027-26 [I, C*]
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WO 2000042217	IPCI	C12Q0001-68 [ICM, 7]
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EP 1144685	IPCI	C12Q0001-68 [ICM, 6]; C07H0021-00 [ICS, 6]
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	IPCR	C07H0021-00 [I, A]; C07H0021-00 [I, C*]; C07H0021-02 [I, A]; C07H0021-04 [I, A]; C12N0015-09 [N, A]; C12N0015-09 [N, C*]; C12Q [I, S]; C12Q0001-68 [I, A]; C12Q0001-68 [I, C*]; G01N0027-06 [I, A]; G01N0027-06 [I, C*]; G01N0027-30 [I, A]; G01N0027-30 [I, C*]; G01N0027-327 [I, A]; G01N0027-327 [I, C*]; G01N0027-416 [I, A]; G01N0027-416 [I, C*]; G01N0033-566 [I, A]; G01N0033-566 [I, C*]; G01N0037-00 [I, A]; G01N0037-00 [I, C*]

TR 200101930 IPCI C12Q0001-68 [ICM,7]; C07H0021-00 [ICS,7]
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 G01N0033-566 [I,C*]; G01N0037-00 [I,A]; G01N0037-00
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AT 238436 IPCI C12Q0001-68 [ICM,7]; C07H0021-00 [ICS,7]
 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0021-02
 [I,A]; C07H0021-04 [I,A]; C12N0015-09 [N,A];
 C12N0015-09 [N,C*]; C12Q [I,S]; C12Q0001-68 [I,A];
 C12Q0001-68 [I,C*]; G01N0027-06 [I,A]; G01N0027-06
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 G01N0027-327 [I,A]; G01N0027-327 [I,C*]; G01N0027-416
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 G01N0033-566 [I,C*]; G01N0037-00 [I,A]; G01N0037-00
 [I,C*]

JP 2003521465 IPCI C07H0021-02 [ICM,7]; C07H0021-04 [ICS,7]; C07H0021-00
 [ICS,7,C*]; C12Q0001-68 [ICS,7]; G01N0027-06 [ICS,7];
 G01N0027-30 [ICS,7]; G01N0027-327 [ICS,7]; G01N0027-416
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 [I,C*]; G01N0027-30 [I,A]; G01N0027-30 [I,C*];
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ES 2198282 IPCI C12Q0001-68 [ICM,7]; C07H0021-00 [ICS,7]
 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0021-02
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 G01N0033-566 [I,C*]; G01N0037-00 [I,A]; G01N0037-00
 [I,C*]

ZA 2001005097 IPCI C12Q [ICM,7]
 ECLA C12Q001/68B2H+565/607+565/519+523/319

NO 2001003471 IPCI C12Q [ICM,7]

AB The title method is disclosed. The method comprises use of a DNA/RNA/PNA oligomer, one end of which is attached to a conductive surface, the other end of which is attached to a photoinducible redox-active substance. Upon

hybridization of this tethered oligomer derivative, the elec. communication between the redox-active substance and conductive surface is increased. This hybridization-enhanced elec. current can be detected by amperometry, voltammetry or conductivity measurements. Two types of oligonucleotide derivs. were described. The oligonucleotides were attached to a gold-coated mica surface. The other end of one of the oligonucleotides was attached to ubiquinone and this was complexed with the reaction center protein of Rhodobacter sphaeroides. The other oligonucleotide was conjugated to the quinone cofactor PQQ which was in turn conjugated to Zn-bacteriochlorophyll.

- ST hybridization electrochem detection; photoinducible redox agent
oligonucleotide conjugate electrode hybridization
- IT Oligonucleotides
Peptide nucleic acids
RL: ARG (Analytical reagent use); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(conjugates with electrode and photoinducible redox agent; method for
electrochem. detection of sequence-specific nucleic acid-oligomer
hybridization)
- IT Semiconductor materials
(conjugates with photoinducible redox agent-oligonucleotide conjugates;
method for electrochem. detection of sequence-specific nucleic
acid-oligomer hybridization)
- IT Quinones
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(electron acceptor; method for electrochem. detection of
sequence-specific nucleic acid-oligomer hybridization)
- IT Flavins
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(electron donor/acceptor; method for electrochem. detection of
sequence-specific nucleic acid-oligomer hybridization)
- IT Metalloporphyrins
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(electron donor; method for electrochem. detection of sequence-specific
nucleic acid-oligomer hybridization)
- IT Bacteriochlorophylls
Chlorophylls, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(metal complexes, electron donor; method for electrochem. detection of
sequence-specific nucleic acid-oligomer hybridization)
- IT Nucleic acid hybridization
(method for electrochem. detection of sequence-specific nucleic
acid-oligomer hybridization)
- IT Cytochromes
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST
(Analytical study); USES (Uses)
(method for electrochem. detection of sequence-specific nucleic
acid-oligomer hybridization)
- IT Redox agents
(photoinducible, oligonucleotides conjugates with electrode and; method
for electrochem. detection of sequence-specific nucleic acid-oligomer
hybridization)
- IT 14701-21-4D, Silver(I), halogenides, conjugates with photoinducible redox
agent-oligonucleotide conjugates, analysis 17493-86-6D, Copper(I),
halogenides, conjugates with photoinducible redox agent-oligonucleotide
conjugates, analysis

RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(electrodes coated with; method for electrochem. detection of sequence-specific nucleic acid-oligomer hybridization)

IT 7429-90-5D, Aluminum, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7439-89-6D, Iron, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7439-92-1D, Lead, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7439-96-5D, Manganese, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7439-97-6D, Mercury, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-02-0D, Nickel, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-05-3D, Palladium, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-06-4D, Platinum, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-22-4D, Silver, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-43-9D, Cadmium, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-44-0D, Carbon, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-50-8D, Copper, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-57-5D, Gold, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis 7440-66-6D, Zinc, conjugates with photoinducible redox agent-oligonucleotide conjugates, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(electrodes; method for electrochem. detection of sequence-specific nucleic acid-oligomer hybridization)

IT 84-65-1, 9,10-Anthraquinone 98-92-0, Nicotinamide 106-51-4, 1,4-Benzoquinone, analysis 130-15-4, 1,4-Naphthoquinone 524-42-5, 1,2-Naphthoquinone 583-63-1, 1,2-Benzoquinone 72909-34-3, Pyrroloquinoline quinone
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(electron acceptor; method for electrochem. detection of sequence-specific nucleic acid-oligomer hybridization)

IT **229016-44-8** 229016-46-0
RL: ARG (Analytical reagent use); DEV (Device component use); ANST (Analytical study); USES (Uses)

(method for electrochem. detection of sequence-specific nucleic acid-oligomer hybridization)

IT 134-03-2, Sodium ascorbate 13408-63-4, Hexacyanoferrate(II) 15438-31-0D, charge transfer complexes, analysis 16065-83-1D, Chromium(III), charge transfer complexes, analysis 22541-53-3D, charge transfer complexes, analysis 22541-59-9D, Ruthenium, ion (Ru2+), charge transfer complexes, analysis 22541-59-9D, Ruthenium, ion (Ru2+), hexamine complexes, analysis 22542-07-0D, Osmium, ion (Os2+), charge transfer complexes, analysis
RL: ARU (Analytical role, unclassified); DEV (Device component use); ANST (Analytical study); USES (Uses)

(method for electrochem. detection of sequence-specific nucleic acid-oligomer hybridization)

L64 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:623177 HCAPLUS

DN 127:278418

ED Entered STN: 29 Sep 1997

TI Preparation of oligodeoxyribonucleotide-anthracycline and oligodeoxyribonucleotide-anthracycline triplexes

IN Garbesi, Anna Maria; Bonazzi, Stefania; Zanella, Stefania; Capobianco, Massimo Luigi; Giannini, Giuseppe; Arcamone, Federico
 PA Consiglio Nazionale Delle Ricerche, Italy; Garbesi, Anna Maria; Bonazzi, Stefania; Zanella, Stefania; Capobianco, Massimo Luigi; Giannini, Giuseppe; Arcamone, Federico
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C07H0021-00
 ICS C07H0017-04; A61K0031-70
 CC 33-10 (Carbohydrates)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9733897	A1	19970918	WO 1997-EP1246	19970312 <--
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	CA 2248900	AA	19970918	CA 1997-2248900	19970312 <--
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	EP 888372	A1	19990107	EP 1997-914227	19970312 <--
	EP 888372	B1	20010816		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	AT 204289	E	20010915	AT 1997-914227	19970312 <--
	ES 2162267	T3	20011216	ES 1997-914227	19970312 <--
	PT 888372	T	20020130	PT 1997-914227	19970312 <--
	US 6160102	A	20001212	US 1998-142521	19980909 <--
PRAI	IT 1996-FI44	A	19960313	<--	
	WO 1997-EP1246	W	19970312	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9733897	ICM	C07H0021-00
	ICS	C07H0017-04; A61K0031-70
	IPCI	C07H0021-00 [ICM,6]; C07H0017-04 [ICS,6]; C07H0017-00 [ICS,6,C*]; A61K0031-70 [ICS,6]
	IPCR	C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
CA 2248900	IPCI	C07H0021-00 [ICM,6]; C07C0069-21 [ICS,6]; C07H0015-252 [ICS,6]; C07H0015-00 [ICS,6,C*]; C07C0050-36 [ICS,6]; C07C0050-38 [ICS,6]; C07C0050-00 [ICS,6,C*]; A61K0031-70 [ICS,6]; C07C0069-95 [ICS,6]; C07C0069-00 [ICS,6,C*]
AU 9721554	IPCI	C07H0021-00 [ICM,6]; C07H0017-04 [ICS,6]; C07H0017-00 [ICS,6,C*]; A61K0031-70 [ICS,6]
	IPCR	C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
EP 888372	IPCI	C07H0021-00 [ICM,6]; C07H0017-04 [ICS,6]; C07H0017-00 [ICS,6,C*]; A61K0031-70 [ICS,6]
	IPCR	C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
AT 204289	IPCI	C07H0021-00 [ICM,7]; C07H0017-04 [ICS,7]; C07H0017-00 [ICS,7,C*]; A61K0031-70 [ICS,7]

ES 2162267 IPCR C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 IPCI C07H0021-00 [ICM,7]; C07H0017-04 [ICS,7]; C07H0017-00 [ICS,7,C*]; A61K0031-70 [ICS,7]
 IPCR C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 PT 888372 IPCI C07H0021-00 [ICM,7]; C07H0017-04 [ICS,7]; C07H0017-00 [ICS,7,C*]; A61K0031-70 [ICS,7]
 IPCR C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 US 6160102 IPCI C12Q0001-68 [ICM,7]; C07H0019-00 [ICS,7]; C07H0021-00 [ICS,7]; C07H0021-02 [ICS,7]; C07H0021-04 [ICS,7]; C07H0015-24 [ICS,7]; C07H0015-00 [ICS,7,C*]
 IPCR C07H0017-00 [I,C*]; C07H0017-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 NCL 536/023.100; 435/006.000; 536/006.400; 536/022.100
 ECLA C07H017/04; C07H021/00G
 AB The present invention refers to conjugates formed by a natural or modified oligonucleotide, capable of forming a triple helix with a DNA chain, linked to the aglycon moiety of an anthracycline or to an anthracyclinone via an appropriated linker; such conjugates are capable to bind selectively to specific DNA regions inhibiting their transcription and therefore the formation of the corresponding codified protein.
 ST oligodeoxyribonucleotide anthracycline anthracyclinone triplex prepn
 IT DNA
Oligodeoxyribonucleotides
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (anthracycline and anthracyclinone-containing; preparation of oligodeoxyribonucleotide-anthracycline and oligodeoxyribonucleotide-anthracyclinone triplexes)
 IT 52744-22-6, Carminomycinone 196512-07-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of oligodeoxyribonucleotide-anthracycline and oligodeoxyribonucleotide-anthracyclinone triplexes)
 IT 193009-00-6P 193009-01-7P 193160-28-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of oligodeoxyribonucleotide-anthracycline and oligodeoxyribonucleotide-anthracyclinone triplexes)
 IT 193228-98-7P 193228-99-8P 193229-00-4P
 196512-05-7P 196719-12-7P 196824-81-4P 196824-93-8P
 196824-94-9P 196824-95-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of oligodeoxyribonucleotide-anthracycline and oligodeoxyribonucleotide-anthracyclinone triplexes)
 L64 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1997:381701 HCAPLUS
 DN 127:149343
 ED Entered STN: 19 Jun 1997
 TI Synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivatives
 AU Garbesi, Anna; Bonazzi, Stefania; Zanella, Stefania; Capobianco, Massimo L.; Giannini, Giuseppe; Arcamone, Federico
 CS I.Co.CEA-CNR, Bologna, 40129, Italy
 SO Nucleic Acids Research (1997), 25(11), 2121-2128
 CODEN: NARHAD; ISSN: 0305-1048
 PB Oxford University Press
 DT Journal
 LA English

CC 33-10 (Carbohydrates)
 Section cross-reference(s): 1, 24

AB Conjugation of an anthracycline to a triplex-forming oligonucleotide (TFO) allows delivery of this drug to a specific DNA site, preserving the intercalation geometry of this class of anticancer agents. A conjugate in which the TFO is linked via a hexamethylene bridge to the O-4 on the D ring of the anthraquinone moiety affords the most stable triple helix, through intercalation of the planar chromophore between DNA bases and of both the TFO and the amino sugar to the major and the minor groove resp.

ST anthracycline oligodeoxynucleotide conjugate anticancer prepn; triple helix intercalation chromophore conjugate

IT Antitumor agents
 (synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivs.)

IT **Oligodeoxyribonucleotides**
 RL: PRP (Properties)
 (synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivs.)

IT Anthracyclines
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivs.)

IT 193160-30-4P **193229-02-6P 193229-03-7P**
193229-04-8P 193229-05-9P
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
 (synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivs.)

IT 629-09-4, 1,6-Diiodohexane 52744-22-6, Carminomycinone 177650-91-8
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivs.)

IT 193008-99-0P 193009-00-6P 193009-01-7P 193009-02-8P 193160-28-0P
 193160-29-1P **193228-98-7P 193228-99-8P**
193229-00-4P 193229-01-5P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (synthesis and binding properties of conjugates between oligodeoxynucleotides and daunorubicin derivs.)

RE.CNT 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD

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AN 1996:184037 HCAPLUS

DN 124:254781

ED Entered STN: 30 Mar 1996

TI Conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures

IN Dinkelborg, Ludger; Hilger, Christoph-Stephan; Niedballa, Ulrich; Platzek, Johannes; Raduechel, Bernd; Speck, Ulrich

PA Schering A.-G., Germany

SO Ger. Offen., 25 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07H0021-04

ICS A61K0051-00

ICA C07F0009-547

CC 8-9 (Radiation Biochemistry)

Section cross-reference(s): 33

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4424922	A1	19960118	DE 1994-4424922	19940714 <--
	US 2002077306	A1	20020620	US 1995-488290	19950607 <--
	IL 114237	A1	20000831	IL 1995-114237	19950620 <--
	CA 2194558	AA	19960201	CA 1995-2194558	19950630 <--
	WO 9602274	A1	19960201	WO 1995-EP2539	19950630 <--
	W: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	AU 9529791	A1	19960216	AU 1995-29791	19950630 <--
	EP 777498	A1	19970611	EP 1995-925792	19950630 <--
	EP 777498	B1	20040428		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CN 1152879	A	19970625	CN 1995-194000	19950630 <--
	HU 76329	A2	19970828	HU 1997-100	19950630 <--
	JP 10503182	T2	19980324	JP 1995-504630	19950630 <--
	RU 2165771	C2	20010427	RU 1997-102039	19950630 <--
	AT 265229	E	20040515	AT 1995-925792	19950630 <--
	PT 777498	T	20040930	PT 1995-925792	19950630 <--

ES 2220933	T3	20041216	ES 1995-925792	19950630 <--
SK 284598	B6	20050701	SK 1997-28	19950630 <--
CZ 295930	B6	20051214	CZ 1997-114	19950630 <--
ZA 9505895	A	19960219	ZA 1995-5895	19950714 <--
TW 502040	B	20020911	TW 1995-84110812	19951014 <--
NO 9700141	A	19970314	NO 1997-141	19970113 <--
NO 318585	B1	20050411		
AU 9920360	A1	19990617	AU 1999-20360	19990312 <--
AU 721330	B2	20000629		
PRAI DE 1994-4424922	A	19940714	<--	
US 1994-336127	B2	19941104	<--	
US 1994-336128	B2	19941104	<--	
DE 1994-4445078	A	19941205	<--	
US 1994-357573	B2	19941215	<--	
US 1994-358065	B2	19941215	<--	
US 1995-409813	B1	19950324	<--	
AU 1995-29791	A3	19950630	<--	
WO 1995-EP2539	W	19950630	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 4424922	ICM	C07H0021-04
	ICS	A61K0051-00
	ICA	C07F0009-547
	IPCI	C07H0021-04 [ICM,6]; C07H0021-00 [ICM,6,C*]; A61K0051-00 [ICS,6]; C07F0009-547 [ICA,6]; C07F0009-00 [ICA,6,C*]
	IPCR	A61K0051-02 [I,C*]; A61K0051-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]
US 2002077306	ECLA	A61K051/04H; C07H021/00G; C07H023/00D
	IPCI	A61K0031-70 [ICM,7]; C12Q0001-68 [ICS,7]; C12P0019-34 [ICS,7]; C12P0019-00 [ICS,7,C*]
	NCL	514/044.000; 435/006.000; 435/091.100
IL 114237	ECLA	A61K051/04H; C07H021/00G; C07H023/00D
	IPCI	C07H0021-04 [ICM,7]; C07H0021-00 [ICM,7,C*]; C12Q0001-16 [ICS,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
CA 2194558	IPCI	C07H0021-00 [ICM,6]; A61K0041-00 [ICS,6]; A61K0051-06 [ICS,6]; A61K0051-02 [ICS,6,C*]; C12P0019-34 [ICS,6]; C12P0019-00 [ICS,6,C*]; G01N0033-53 [ICS,6]; C12Q0001-68 [ICS,6]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
WO 9602274	IPCI	A61K0041-00 [ICM,6]; A61K0051-04 [ICS,6]; A61K0051-02 [ICS,6,C*]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
	ECLA	C07H021/00G
AU 9529791	IPCI	A61K0041-00 [ICM,6]; A61K0051-04 [ICS,6]; A61K0051-02 [ICS,6,C*]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
EP 777498	IPCI	A61K0041-00 [ICM,6]; A61K0051-04 [ICS,6]; A61K0051-02 [ICS,6,C*]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
CN 1152879	IPCI	A61K0041-00 [ICM,6]; A61K0051-04 [ICS,6]; A61K0051-02 [ICS,6,C*]
	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
	ECLA	C07H021/00G
HU 76329	IPCI	C07H0021-00 [ICM,6]; C07H0023-00 [ICS,6]; A61K0041-00 [ICS,6]; A61K0051-04 [ICS,6]; A61K0051-02 [ICS,6,C*]

JP 10503182 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 IPCI C07H0023-00 [ICM,6]; A61K0031-70 [ICS,6]; A61K0051-00 [ICS,6]; C12Q0001-68 [ICS,6]; C12N0015-09 [ICS,6]
 RU 2165771 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 IPCI A61K0041-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
 AT 265229 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 IPCI A61K0041-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
 PT 777498 IPCI A61K0041-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
 ES 2220933 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 IPCI A61K0041-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
 SK 284598 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 IPCI A61K0041-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
 CZ 295930 ECLA C07H021/00G
 IPCI A61K0041-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]
 ZA 9505895 ECLA C07H021/00G
 IPCI C07H [ICM,6]; A61K [ICS,6]; C12P [ICS,6]
 IPCR A61K0051-02 [I,C*]; A61K0051-04 [I,A]; C07H0021-00 [I,A]; C07H0021-00 [I,C*]; C07H0023-00 [I,A]; C07H0023-00 [I,C*]
 TW 502040 IPCI C07H0023-00 [ICM,7]; C12Q0001-68 [ICS,7]
 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 NO 9700141 IPCI C07H0021-00 [ICM,7]; A61K0051-04 [ICS,7]; A61K0051-02 [ICS,7,C*]; A61K0041-00 [ICS,7]
 IPCR C07H0021-00 [I,A]; C07H0021-00 [I,C*]
 ECLA C07H021/00G
 AU 9920360 IPCI A61K0051-06 [ICM,6]; A61K0051-02 [ICM,6,C*]; A61K0041-00 [ICS,6]; C12Q0001-68 [ICS,6]; C07H0021-02 [ICS,6]; C07H0021-00 [ICS,6,C*]
 IPCR A61K0041-00 [I,A]; A61K0041-00 [I,C*]; A61K0051-02 [I,C*]; A61K0051-06 [I,A]; C07H0021-00 [I,C*]; C07H0021-02 [I,A]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
 AB Conjugates of modified oligonucleotides with complexes of radioactive or stable metal isotopes, which bind specifically to biol. target structures, are useful in diagnostic imaging and radiotherapy. The oligonucleotides are modified to render them resistant to degradation by endogenous nucleases, e.g. by O-alkylation, halogenation, amination, or reduction at the 2' position or by replacement of phosphodiester groups by phosphorothioate, phosphorodithioate, or alkylphosphonate linkages. The oligonucleotides are selected from a random mixture for binding to a target such as a non-nucleic acid macromol., tissue, or organ. Thus, a 30-mer oligonucleotide ligand for NGF was conjugated with the linker β -cyanoethyl N,N-diisopropylamino-6-(trifluoroacetamido)-1-hexylphosphoramidite, then with 10-[7-(4-isothiocyanatophenyl)-2-hydroxy-5-oxo-7-(carboxymethyl)-4-azaheptyl]-1,4,7-tris(carboxymethyl)-1,4,7,10-tetraazacyclododecane (preparation given), and complexed with $^{111}\text{In(III)}$ for use as a radiodiagnostic agent.
 ST oligonucleotide metal complex diagnostic imaging; radionuclide complex
 oligonucleotide scintigraphy
 IT Rare earth metals, biological studies
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (complexes, with chelating agent-oligonucleotide conjugates; conjugates

- of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Imaging
Radiotherapy
Scintigraphy
(conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Chelating agents
(conjugates with oligonucleotides; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Animal tissue
Organ
(oligonucleotide binding by, for imaging; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Biopolymers
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(oligonucleotide binding by, for imaging; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Ligands
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(oligonucleotides, conjugates with metal complexes; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Radioelements, biological studies
Transition metal compounds
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(complexes, with chelating agent-oligonucleotide conjugates; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT Coordination compounds
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(conjugates, with oligonucleotides; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT **Nucleotides, biological studies**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(oligo-, 2'-modified, conjugates with metal complexes; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT 144322-29-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(NGF ligand; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)
- IT 10098-91-6DP, Yttrium-90, complex with oligonucleotide-chelating agent conjugate, biological studies 13981-25-4DP, Copper-64, complex with oligonucleotide-chelating agent conjugate, biological studies 14119-09-6DP, Gallium-67, complex with oligonucleotide-chelating agent conjugate, biological studies 14133-76-7DP, Technetium-99, complexes with oligonucleotide-chelating agent conjugates, biological studies

14913-49-6DP, Bismuth-212, complex with oligonucleotide-chelating agent conjugate, biological studies 15750-15-9DP, Indium-111, complex with oligonucleotide-chelating agent conjugate, biological studies 175279-02-4DP, technetium-99m complexes 175279-03-5DP, yttrium-90 complexes 175387-29-8DP, indium-111 complexes 175387-30-1DP, bismuth-212 complexes **175387-32-3DP**, technetium-99m complexes 175387-33-4DP, technetium-99m complexes 175387-34-5DP, technetium-99m complexes 175387-35-6DP, copper-64 complex 175387-36-7DP, yttrium-90 complexes 175387-37-8DP, gallium-67 complex 175387-39-0DP, technetium-99m complexes 175387-40-3DP, technetium-99m complexes 175387-42-5DP, technetium-99m complexes 175387-44-7DP, technetium-99m complexes 175387-45-8DP, technetium-99m complexes 175387-46-9DP, yttrium-90 complexes

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

IT 7429-91-6D, Dysprosium, complexes with chelating agent-oligonucleotide conjugates 7439-88-5D, Iridium, complexes with chelating agent-oligonucleotide conjugates 7439-89-6D, Iron, complexes with chelating agent-oligonucleotide conjugates 7439-91-0D, Lanthanum, complexes with chelating agent-oligonucleotide conjugates 7439-92-1D, Lead, complexes with chelating agent-oligonucleotide conjugates 7439-94-3D, Lutetium, complexes with chelating agent-oligonucleotide conjugates 7439-96-5D, Manganese, complexes with chelating agent-oligonucleotide conjugates 7439-97-6D, Mercury, complexes with chelating agent-oligonucleotide conjugates 7439-98-7D, Molybdenum, complexes with chelating agent-oligonucleotide conjugates 7440-00-8D, Neodymium, complexes with chelating agent-oligonucleotide conjugates 7440-02-0D, Nickel, complexes with chelating agent-oligonucleotide conjugates 7440-04-2D, Osmium, complexes with chelating agent-oligonucleotide conjugates 7440-06-4D, Platinum, complexes with chelating agent-oligonucleotide conjugates 7440-10-0D, Praseodymium, complexes with chelating agent-oligonucleotide conjugates 7440-12-2D, Promethium, complexes with chelating agent-oligonucleotide conjugates 7440-15-5D, Rhenium, complexes with chelating agent-oligonucleotide conjugates 7440-18-8D, Ruthenium, complexes with chelating agent-oligonucleotide conjugates 7440-19-9D, Samarium, complexes with chelating agent-oligonucleotide conjugates 7440-20-2D, Scandium, complexes with chelating agent-oligonucleotide conjugates 7440-25-7D, Tantalum, complexes with chelating agent-oligonucleotide conjugates 7440-26-8D, Technetium, complexes with chelating agent-oligonucleotide conjugates 7440-27-9D, Terbium, complexes with chelating agent-oligonucleotide conjugates 7440-28-0D, Thallium, complexes with chelating agent-oligonucleotide conjugates 7440-30-4D, Thulium, complexes with chelating agent-oligonucleotide conjugates 7440-32-6D, Titanium, complexes with chelating agent-oligonucleotide conjugates 7440-33-7D, Tungsten, complexes with chelating agent-oligonucleotide conjugates 7440-42-8D, Boron, complexes with chelating agent-oligonucleotide conjugates 7440-45-1D, Cerium, complexes with chelating agent-oligonucleotide conjugates 7440-47-3D, Chromium, complexes with chelating agent-oligonucleotide conjugates 7440-48-4D, Cobalt, complexes with chelating agent-oligonucleotide conjugates 7440-50-8D, Copper, complexes with chelating agent-oligonucleotide conjugates 7440-52-0D, Erbium, complexes with chelating agent-oligonucleotide conjugates 7440-53-1D, Europium, complexes with chelating agent-oligonucleotide conjugates 7440-54-2D, Gadolinium, complexes with chelating agent-oligonucleotide conjugates 7440-55-3D, Gallium, complexes with chelating agent-oligonucleotide conjugates

7440-57-5D, Gold, complexes with chelating agent-oligonucleotide conjugates 7440-58-6D, Hafnium, complexes with chelating agent-oligonucleotide conjugates 7440-60-0D, Holmium, complexes with chelating agent-oligonucleotide conjugates 7440-62-2D, Vanadium, complexes with chelating agent-oligonucleotide conjugates 7440-64-4D, Ytterbium, complexes with chelating agent-oligonucleotide conjugates 7440-65-5D, Yttrium, complexes with chelating agent-oligonucleotide conjugates 7440-68-8D, Astatine, complexes with chelating agent-oligonucleotide conjugates 7440-69-9D, Bismuth, complexes with chelating agent-oligonucleotide conjugates 7440-74-6D, Indium, complexes with chelating agent-oligonucleotide conjugates

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

IT 76-83-5, Triphenylmethyl chloride 2776-60-5, Glycylglycine methyl ester hydrochloride 4048-33-3, 6-Aminohexanol 4781-83-3 5437-45-6, Benzyl bromoacetate 5455-98-1, N-(2,3-Epoxypropyl)phthalimide 6066-82-6, N-Hydroxysuccinimide 34805-17-9 34914-36-8 53911-69-6 81186-33-6 84611-23-4 86030-43-5 114873-37-9, 1,4,7-Tris(carboxymethyl)-1,4,7,10-tetraazacyclododecane 116919-17-6 121557-52-6 121806-83-5 122497-12-5 131274-04-9 133975-85-6 137174-07-3 155269-64-0 157022-76-9 159639-90-4 164575-76-2 174701-10-1 174701-34-9 174701-35-0 175387-46-9 175387-47-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

IT 146270-94-2P 174700-60-8P 174700-61-9P 174700-62-0P 174700-63-1P 174701-08-7P 174701-09-8P 174701-15-6P 174701-16-7P 174701-17-8P 174701-18-9P 174701-19-0P 174701-20-3P 174701-21-4P 174701-22-5P 174701-23-6P 174701-24-7P 174701-25-8P 174701-26-9P 174701-27-0P 174701-28-1P 174701-29-2P 174701-30-5P 174701-31-6P 174701-32-7P 174701-33-8P 175279-02-4P 175279-03-5P 175387-28-7P 175387-29-8P 175387-30-1P 175387-31-2P 175387-32-3P 175387-33-4P 175387-34-5P 175387-35-6P 175387-36-7P 175387-37-8P 175387-38-9P 175387-39-0P 175387-40-3P 175387-41-4P 175387-42-5P 175387-43-6P 175387-44-7P 175387-45-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

IT 9061-61-4, NGF 37259-58-8, Serine proteinase

RL: BSU (Biological study, unclassified); BIOL (Biological study) (oligonucleotide ligand for; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

IT 9026-81-7, Nuclease

RL: BSU (Biological study, unclassified); BIOL (Biological study) (resistance to; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

IT 144322-22-5

RL: RCT (Reactant); RACT (Reactant or reagent) (serine proteinase ligand; conjugates of metal complexes and oligoribonucleotides which bind specifically to selected target structures)

L64 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:573214 HCAPLUS
DN 121:173214

ED Entered STN: 15 Oct 1994
TI Effect of derivatization of ribophosphate backbone and terminal
ribophosphate groups in oligoribonucleotides on their stability and
interaction with eukaryotic cells
AU Boutorine, A. S.; Venyaminova, A. G.; Repkova, M. N.; Sergueyeva, Z. A.;
Pyshnyi, D. V.
CS Sib. Div., Inst. Bioorg. Chem., Novosibirsk, 630090, Russia
SO Biochimie (1994), 76(1), 23-32
CODEN: BICMBE; ISSN: 0300-9084
DT Journal
LA English
CC 6-2 (General Biochemistry)
AB Various derivs. of oligoribonucleotides were synthesized by the
H-phosphonate method. Different modifications of the ribophosphate
backbone were designed in order to protect the derivs. against nucleolytic
enzymes present in the biol. media. These modifications include coupling
of fluorescein moiety to 3'-terminal ribose, 2'-O-methylation of ribose,
introduction of phosphoroamidates and coupling of the last 3'-terminal
nucleotide via the 3'-3'-phosphodiester bond. All modifications were
tested for their effect on the stability of the derivs. against
phosphodiesterase from snake venom and nucleases of the cell culture
media. 2'-O-methylated oligoribonucleotides containing either terminal
3'-3'-linkage or two 3'-terminal phosphoroamidate internucleotide bonds
appeared to be the most stable under the most severe conditions used. The
results demonstrate a possibility to use protected oligoribonucleotide
derivs. for expts. in vivo when the use of deoxy-analogs might be
ineffective. The uptake of 2'-O-methylated derivs. and their
5'-cholesterol conjugates (coupled via a disulfide bond) by human
carcinoma cells did not differ from that of the corresponding
oligodeoxyribonucleotides. 85% Of the bound derivs. were found in the
membrane-cytosolic fraction, while only 15% were found in the nuclear
fraction. The oligonucleotide moiety of 2'-O-methyloligoribonucleotide-
cholesterol conjugate was not translocated through the cellular membrane.
After cleavage of the linkage between cholesterol and oligonucleotide by
dithiothreitol the major portion of the oligonucleotide moiety was
released into the media. The derivs., as well as their 5'-cholesterol
conjugates, which entered the cells, were stable and protected from action
of dithiothreitol dissolved in culture media. These results demonstrate
an endocytosis mechanism of penetration as observed in similar expts. using
oligodeoxyribonucleotides.
ST oligoribonucleotide deriv stability uptake eukaryote
IT Eukaryote
(oligoribonucleotides and cholesterol conjugates uptake by,
derivatization of ribophosphate backbone and terminal ribophosphate
groups effect on)
IT Ribonucleic acids
RL: BIOL (Biological study)
(stability of and eukaryotic cells interaction with, derivatization of
ribophosphate backbone and terminal ribophosphate groups effect on)
IT Animal cell line
(T-24, oligoribonucleotide-cholesterol conjugates uptake by)
IT Biological transport
(absorption, of oligoribonucleotides and cholesterol conjugates, by
eukaryotic cells, derivatization of ribophosphate backbone and terminal
ribophosphate groups effect on)
IT **Nucleotides, biological studies**
RL: BIOL (Biological study)
(oligo-, stability of and eukaryotic cells interaction with,
derivatization of ribophosphate backbone and terminal ribophosphate
groups effect on)

IT 9025-82-5, Phosphodiesterase
RL: PRP (Properties)
(oligoribonucleotides degradation by, derivatization of ribophosphate backbone and terminal ribophosphate groups response to)

IT 9026-81-7, Nuclease
RL: PRP (Properties)
(oligoribonucleotides degradation by, of eukaryotic cell culture media, derivatization of ribophosphate backbone and terminal ribophosphate groups effect on)

IT 157818-12-7
RL: PRP (Properties)
(phosphodiesterase and nuclease degradation anal. of and eukaryotic cells uptake of)

IT 157818-11-6P 157818-13-8P 157818-14-9P 157818-15-0P 157818-16-1P
157818-17-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn and phosphodiesterase and nuclease degradation anal. of and eukaryotic cells uptake of)

IT 157818-18-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with fluoresceine-adipic acid dihydrazide conjugate)

IT 157597-83-6
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with oligoribonucleotide)

IT 148433-72-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with oligoribonucleotides)

IT 149225-42-3 157818-19-4
RL: PROC (Process)
(uptake of, by T24 human carcinoma cells, kinetics of)

L64 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
AN 1994:271031 HCAPLUS
DN 120:271031
ED Entered STN: 28 May 1994
TI Use of a base-labile protected derivative of 6-mercaptohexanol for the preparation of oligonucleotides containing a thiol group at the 5'-end
AU de la Torre, Beatriz G.; Avino, Anna Maria; Escarceller, Monica; Royo, Miriam; Albericio, Fernando; Eritja, Ramon
CS Dep. Mol. Genet., CSIC, Barcelona, 08034, Spain
SO Nucleosides & Nucleotides (1993), 12(9), 993-1005
CODEN: NUNUD5; ISSN: 0732-8311
DT Journal
LA English
CC 33-9 (Carbohydrates)
Section cross-reference(s): 34
AB The preparation of a base-labile 2,4-dinitrophenylethyl (dnpe) protected derivative of 6-mercaptohexanol is described. The use of the phosphoramidite derivative of this compound improves both yields and the time needed for the preparation of oligonucleotides containing a thiol group at the 5'-end.
ST oligodeoxyribonucleotide prepn dinitrophenylethyl protective group;
nucleotide oligodeoxyribo prepn dinitrophenylethyl protective group;
peptide coupling oligodeoxyribonucleotide; digoxigenin coupling oligodeoxyribonucleotide
IT Protective groups
(preparation of oligodeoxyribonucleotides using dinitrophenylethyl as protective group)
IT **Nucleotides, polymers**
RL: SPN (Synthetic preparation); PREP (Preparation)

(oligo-, deoxyribo-, preparation of oligodeoxyribonucleotides using dinitrophenylethyl as protective group)

IT 9001-78-9, Alkaline phosphatase 9025-82-5, Phosphodiesterase
 RL: PROC (Process)
 (hydrolysis of oligodeoxyribonucleotides in presence of)

IT 1633-78-9P 40145-10-6P 60680-77-5P 100360-57-4P 154509-85-0P
 154509-86-1P 154509-87-2P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (intermediate in preparation of oligonucleotides containing a thiol group at the 5'-end)

IT 154509-84-9P 154804-70-3P 154804-71-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and coupling with peptide and digoxigenin)

IT 154509-83-8P 154804-68-9P 154804-69-0P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and deblocking of)

IT 135625-44-4P 154509-88-3P 154804-72-5P 154804-73-6P
154804-74-7P 154804-75-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

IT 103-63-9 2009-83-8 3695-77-0 16721-80-5, Sodium sulfide (Na(SH))
 89992-70-1 135607-77-1 154509-89-4
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reactant, in preparation of oligonucleotides containing a thiol group at the 5'-end)

L64 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 1992:402110 HCAPLUS

DN 117:2110

ED Entered STN: 11 Jul 1992

TI Solution studies on the structure of bent DNA in the cAMP receptor protein-lac DNA complex

AU Heyduk, Tomasz; Lee, James C.

CS Dep. Hum. Biol. Chem. Genet., Univ. Texas, Galveston, TX, 77550, USA

SO Biochemistry (1992), 31(22), 5165-71

CODEN: BICHAW; ISSN: 0006-2960

DT Journal

LA English

CC 3-4 (Biochemical Genetics)

Section cross-reference(s): 6

AB CAMP receptor protein (CRP) is involved in the regulation of >20 genes. A step in the mechanism of activation of transcription is to induce a significant bending of the DNA upon complex formation between specific DNA and the protein. The induced DNA bending and a structure of the protein-DNA complex were studied by fluorescence energy transfer in 50 mM Tris, 1 mM EDTA, and 50 mM KCl at pH 7.8 and 20°. The symmetry of the DNA bend was estimated by measuring the efficiency of transfer between the protein and a label on either the upstream or the downstream end of a lac DNA fragment. The bend, despite the asymmetry in the DNA sequence, is sym. for 26-40 bp fragments. Using fluorescence energy transfer, the extent of DNA bending was estimated by measuring the end-to-end distance of the DNA fragment which was labeled with a donor-acceptor pair on two opposite ends. Both steady-state and time-resolved measurements showed that in a 26-bp lac DNA fragment complexed with CRP, the end-to-end distance is .apprx.77 Å which corresponds to a bending angle of 80° or 100°, depending on the actual contour length between the fluorophores in the free DNA fragment. The results using longer DNA fragments show no measurable amount of energy transfer; thus, it is very

unlikely that the DNA completely wraps around the CRP mol. This study shows that the approach of fluorescence energy transfer has proven to be a versatile technique to provide useful structural information on the DNA-protein complex in potentially any solution conditions.

- ST DNA bent conformation cAMP receptor protein; lac promoter DNA cAMP receptor protein
- IT Transcription, genetic
(activation of, by cAMP receptor protein, fluorescence energy transfer study of bent DNA structure in)
- IT Conformation and Conformers
(bent, of lac promoter DNA fragment in complex with cAMP receptor protein, fluorescence energy transfer study of)
- IT Ribonucleic acid formation factors
RL: BIOL (Biological study)
(CAP (catabolite gene activator protein), complexes with lac promoter DNA fragment, bent DNA conformation in, fluorescence energy transfer study of)
- IT Deoxyribonucleoproteins
RL: PRP (Properties)
(RNA formation factor CAP-containing, bent DNA conformation in, fluorescence energy transfer study of)
- IT Genetic element
RL: BIOL (Biological study)
(promoter, of lac gene, cAMP receptor protein complex with DNA fragment of, bent DNA conformation in, fluorescence energy transfer study of)
- IT Gene, microbial
RL: BIOL (Biological study)
(lac, promoter of, cAMP receptor protein complex with DNA fragment of, bent DNA conformation in, fluorescence energy transfer study of)
- IT 141634-61-9 141634-64-2 141634-65-3
RL: BIOL (Biological study)
(bending of, symmetry and degree of, cAMP receptor protein binding effect on, transcriptional regulation of lac promoter in relation to)
- IT 76877-33-3 141584-70-5 141584-71-6 141634-62-0
141634-63-1 141706-80-1 141706-81-2
RL: PRP (Properties)
(spectroscopic properties of)

- L64 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
- AN 1992:194779 HCAPLUS
- DN 116:194779
- ED Entered STN: 16 May 1992
- TI Solid-phase preparation of 5',3'-heterobifunctional oligodeoxynucleotides using modified solid supports
- AU Asseline, Ulysse; Bonfils, Edwige; Kurfurst, Robin; Chassignol, Marcel; Roig, Victoria; Nguyen Thanh Thuong
- CS Cent. Biophys. Mol., CNRS, Orleans, 45071, Fr.
- SO Tetrahedron (1992), 48(7), 1233-54
CODEN: TETRAB; ISSN: 0040-4020
- DT Journal
- LA English
- CC 33-9 (Carbohydrates)
- AB The solid-phase preparation of oligodeoxyribonucleotides attached to intercalator or reactive groups through their 5'- and (or) 3'-ends, is reported. These syntheses implicate the introduction of suitable masked functional groups at the 5'-end of the oligonucleotide by the intermediate of their phosphoramidite derivs. or at the 3'-end of the oligonucleotide using modified solid supports. After full deblocking, the functional groups (phosphate, thiophosphate, primary amine, or thiol) can be reacted with the suitable reactive group in the chosen ligand. These methods

allow the preparation of heterobifunctional derivatized oligodeoxyribonucleotides.

ST oligodeoxynucleotide heterobifunctional solid phase prepn; nucleotide oligodeoxy solid phase prepn

IT **Nucleotides, polymers**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (oligo-, deoxyribo-, 5',3'-heterobifunctional, preparation of, solid-phase)

IT 5197-62-6
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (iodination of)

IT 62573-16-4P 124685-36-5P 124685-37-6P 124685-38-7DP, solid support
 136055-02-2P 136055-03-3DP, polymer support 140613-60-1DP, solid support
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and reaction of, in synthesis of oligodeoxyribonucleotides)

IT 97463-42-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation and tritylation of)

IT 124685-43-4P 131871-56-2P 140613-58-7P 140632-93-5P 140698-21-1P
 140698-28-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of)

IT 128072-19-5P 136055-06-6P 136072-48-5P 136072-52-1P 136082-64-9P
 136214-76-1P 140613-59-8P 140698-19-7P **140698-20-0P**
140698-22-2P 140698-29-9P 140698-32-4P 140698-33-5P
 140698-34-6P 140698-36-8P 140698-37-9P 140698-39-1P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, solid-phase)

IT 2127-03-9, 2,2'-Dithiodipyridine 4048-33-3, 6-Amino-1-hexanol
 63368-54-7 98796-51-1D, N-acetylated 102690-88-0 140613-55-4D,
 N-acetylated 140613-56-5D, N-acetylated 140613-57-6D, N-acetylated
 140613-61-2
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, in synthesis of oligodeoxyribonucleotides)

IT 1892-29-1, 2,2'-Dithiodiethanol
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (tritylation of, in synthesis of oligodeoxyribonucleotides)

L64 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1990:77868 HCAPLUS
 DN 112:77868
 ED Entered STN: 03 Mar 1990
 TI Preparation of oligodeoxynucleotide 5'-terminators in preparation of
 antivirals
 IN Cohen, J. S.; Mori, K.; Matsukura, M.
 PA United States Dept. of Health and Human Services, USA
 SO U. S. Pat. Appl., 13 pp. Avail. NTIS Order No. PAT-APPL-6-340 073.
 CODEN: XAXXAV
 DT Patent
 LA English
 CC 33-9 (Carbohydrates)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	US 340073	A0	19890815	US 1989-340073	19890418 <--
	CA 2049361	AA	19901019	CA 1990-2049361	19900323 <--

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WO 9012802      A1      19901101      WO 1990-US1501      19900323 <--
W: AU, CA, JP
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE
AU 9055263      A1      19901116      AU 1990-55263      19900323 <--
AU 633911      B2      19930211
EP 469042      A1      19920205      EP 1990-906714      19900323 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE
JP 04500679      T2      19920206      JP 1990-506417      19900323 <--
PRAI US 1989-340073      A      19890418      <--
WO 1990-US1501      A      19900323      <--

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CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
CA 2049361	IPCI	C07H0015-12; C07H0015-00 [C*]
WO 9012802	IPCI	C07H0015-12 [ICM,5]; C07H0015-00 [ICM,5,C*]; C07H0017-00 [ICS,5]; A61K0031-70 [ICS,5]
AU 9055263	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
EP 469042	IPCI	C07H0017-00 [ICM,5]; C07H0015-12 [ICS,5]; C07H0015-00 [ICS,5,C*]; A61K0031-70 [ICS,5]
JP 04500679	IPCR	C07H0021-00 [I,A]; C07H0021-00 [I,C*]
	IPCI	C07H0021-04 [ICM,5]; C07H0021-00 [ICM,5,C*]
AB		5'-Terminators are synthesized and used to modify antiviral oligodeoxynucleotides for use, e.g., in inhibiting the HIV virus (no data). 1-Chloroanthraquinone was heated with 1-(2-hydroxyethyl)piperazine at 150° for 30 min, the resulting 1-[4-[(2-hydroxyethyl)piperazinyl]anthraquinone was treated with EtN(OCHMe2)2 in CH2Cl2 and MeOPCLN(CHMe2)2 to give the corresponding N,N-diisopropylphosphoramidite Me ester (I). In an automated synthesizer, I was condensed with the phosphorothioate oligodeoxynucleotide d(5'-TCG TCG CTG TCT CCG CTT CTT CCT GCC A) at the 5' end by standard techniques to give, after deblocking, the corresponding oligodeoxynucleotide with anthraquinone covalently linked at the 5' end through the piperazine linker. The compds. are potentially more selective and more stable against nucleases than conventional drugs.
ST		oligodeoxynucleotide terminator prepn; nucleotide oligodeoxy terminator prepn; anthracenylpiperazinylethyl phosphoramidite prepn; antiviral modified oligodeoxynucleotide prepn; HIV inhibitor modified oligodeoxynucleotide prepn
IT		Virucides and Virustats (for HIV, 5'-modified phosphorothioate-linked oligodeoxyribonucleotides)
IT		Virus, animal (human immunodeficiency 1, inhibitors, 5'-modified phosphorothioate-linked oligodeoxyribonucleotides)
IT		Nucleotides, polymers RL: SPN (Synthetic preparation); PREP (Preparation) (oligo-, deoxyribo-, thiophosphate-linked, preparation and 5'-end modification of, in preparation of antivirals)
IT		86030-43-5 RL: RCT (Reactant); RACT (Reactant or reagent) (condensation of, with [(hydroxyethyl)piperazinyl]anthraquinone)
IT		115427-90-2 RL: RCT (Reactant); RACT (Reactant or reagent) (condensation of, with anthracenylethyl phosphoramidite derivative)
IT		100360-56-3 RL: RCT (Reactant); RACT (Reactant or reagent) (condensation of, with diisopropylphosphorochloramidite)

IT 122482-20-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and condensation of, with diisopropylphosphorochloramidite)

IT 123861-70-1P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
 (Reactant or reagent)
 (preparation and condensation of, with oligodeoxynucleotides)

IT 124540-09-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation of, as terminator for oligodeoxythionucleotides)

IT 103-76-4, 1-(2-Hydroxyethyl)piperazine
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (substitution reaction of, with chloroanthraquinone)

IT 82-44-0, 1-Chloroanthraquinone
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (substitution reaction of, with piperazinylethanol)

L64 ANSWER 14 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
 AN 1989:526495 HCAPLUS
 DN 111:126495
 ED Entered STN: 14 Oct 1989
 TI Oligodeoxynucleotide analogs with 5'-linked anthraquinone
 AU Mori, Kenya; Subasinghe, Chrisanthi; Cohen, Jack S.
 CS Med. Branch, Natl. Cancer Inst., Bethesda, MD, 20892, USA
 SO FEBS Letters (1989), 249(2), 213-18
 CODEN: FEBLAL; ISSN: 0014-5793
 DT Journal
 LA English
 CC 1-5 (Pharmacology)
 Section cross-reference(s): 33

AB Novel 5'-linked oligodeoxynucleotides, both normal phosphodiester and
 phosphorothioate analogs, in which a covalently attached group at the
 5'-terminus is an anthraquinone were prepared These compds. represent a new
 class of antisense compds. in which the base sequence of the
 oligodeoxynucleotide serves to deliver a nuclease-resistant reactive
 drug-like mol. to a cellular target nucleic acid (mRNA or DNA). The
 anthraquinone derivs. exhibited anti-HIV activity in an in vitro assay
 system.

ST oligodeoxynucleotide analog anthraquinone; virucide oligodeoxynucleotide
 analog anthraquinone

IT Heat of fusion and Heat of freezing
 (of oligodeoxynucleotide analogs linked with anthraquinone)

IT Virucides and Virustats
 (oligodeoxynucleotide analogs linked with anthraquinone)

IT **Nucleotides, polymers**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (oligo-, deoxyribo-, anthraquinone analogs, preparation and
 virucidal activity of)

IT 54540-27-1 122482-15-9 122635-42-1 122635-43-2
 RL: BIOL (Biological study)
 (melting temperature and reaction with anthraquinone derivs. of)

IT 122482-16-0P 122482-17-1P 122497-29-4P 122635-18-1P
 122635-19-2P 122635-20-5P 122635-21-6P 122635-46-5P
 122635-47-6P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and melting temperature and HIV virucidal activity of)

IT 122482-20-6P 122482-21-7P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (preparation and phosphoramidation of)

IT 122482-22-8P 122482-23-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)
(preparation and reaction of, with oligonucleotides)
IT 82-44-0, 1-Chloroanthraquinone
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (hydroxyethyl)piperazine or hydroxyhexylamine)
IT 54284-61-6 122482-18-2 122482-19-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with anthraquinone derivs.)
IT 103-76-4, 1-(2-Hydroxyethyl)piperazine 4048-33-3, 6-Aminohexanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with chloroanthraquinone)
IT 110972-27-5, N,N-Diisopropylmethylphosphonamidic chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with hydroxyethylpiperazinyl- or hydroxyethylamino-
anthraquinone derivs.)

=> sel hit rn 164
E15 THROUGH E47 ASSIGNED

=> fil reg
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<http://www.cas.org/ONLINE/UG/regprops.html>

=> => d sqide can tot

L66 ANSWER 1 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
RN 435230-07-2 REGISTRY
CN L- α -Glutamine, N-[4-[[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-
(phosphonooxy)cyclohexyl]amino]ethyl]amino]-1,4-dioxobutyl]-L-prolyl-L-
threonyl-L-seryl-L-glutaminy-L-seryl-L-arginylglycyl-L- α -aspartyl-L-
prolyl-L-threonylglycyl-L-prolyl-L-lysyl-, (1 \rightarrow 5')-ester with DNA
d(G-C-T-C-C-C-A-G-G-C-T-C-A-A-A) (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE
 SQL 15
 NA 4 a 6 c 3 g 2 t
 NTE conjugated
 modified

type	location	description
modified base	g-1	5'-ester

SEQ 1 gctcccaggc tcaaa

****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

MF Unspecified
 CI MAN
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Conference
 RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:20554

L66 ANSWER 2 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 329991-05-1 REGISTRY
 CN DNA, d(G-C-T-C-C-C-A-G-G-C-T-C-A-A-A), (1→5')-ester with
 N-[4-[[[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-(phosphonooxy)cyclohexyl]amino]ethyl]amino]-1,4-dioxobutyl]glycyl-L-arginyl-L-lysyl-L-lysyl-L-arginyl-L-arginyl-L-glutamyl-L-arginyl-L-arginyl-L-argininamide (9CI) (CA INDEX NAME)
 FS NUCLEIC ACID SEQUENCE
 SQL 15
 NA 4 a 6 c 3 g 2 t
 NTE

type	location	description
modified base	g-1	5'-ester

SEQ 1 gctcccaggc tcaaa

****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

MF Unspecified
 CI MAN
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Patent
 RL.P Roles from patents: PREP (Preparation)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:237835

L66 ANSWER 3 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 308147-58-2 REGISTRY
 CN DNA, d(P-thio) (T-G-G-G-A-G-C-C-G-T-A-G-C-G-A-G-G-C),
 3'-[O-[3-[[4-[[3,4-dihydro-2,5,7,8-tetramethyl-2-(4,8,12-

trimethyltridecyl)-2H-1-benzopyran-6-yl]oxy]-1,4-dioxobutyl]amino]-2-hydroxypropyl] hydrogen phosphorothioate] (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE
SQL 18
NA 3 a 4 c 9 g 2 t
NTE

type	location	description
modified base	c-18	3'-ester
modified link	t-1 - g-2	P-thio
modified link	g-2 - g-3	P-thio
modified link	g-3 - g-4	P-thio
modified link	g-4 - a-5	P-thio
modified link	a-5 - g-6	P-thio
modified link	g-6 - c-7	P-thio
modified link	c-7 - c-8	P-thio
modified link	c-8 - g-9	P-thio
modified link	g-9 - t-10	P-thio
modified link	t-10 - a-11	P-thio
modified link	a-11 - g-12	P-thio
modified link	g-12 - c-13	P-thio
modified link	c-13 - g-14	P-thio
modified link	g-14 - a-15	P-thio
modified link	a-15 - g-16	P-thio
modified link	g-16 - g-17	P-thio
modified link	g-17 - c-18	P-thio

SEQ 1 tgggagccgt agcgaggc

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:5118

L66 ANSWER 4 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 295810-41-2 REGISTRY

CN DNA, d(A-G-C-T-C-C-C-A-G-G-C-T-C-A-A), (1-5')-ester with N-[4-[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-(phosphonoxy)cyclohexyl]amino]ethyl]amino]-1,4-dioxobutyl]-L-alanyl-L-leucyl-L-prolyl-L-prolyl-L-leucyl-L- α -glutamyl-L-arginyl-L-leucyl-L-threonyl-L-leucinamide (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 15

NA 4 a 6 c 3 g 2 t

NTE

type	location	description
modified base	a-1	5'-ester

SEQ 1 agctcccagg ctcaa

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:237835

REFERENCE 2: 133:252734

L66 ANSWER 5 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 295810-40-1 REGISTRY

CN DNA, d(G-C-T-C-C-C-A-G-G-C-T-C-A-A-A), (1→5')-ester with
N-[4-[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-
(phosphonoxy)cyclohexyl]amino]ethyl]amino]-1,4-dioxobutyl]-L-alanyl-L-
leucyl-L-prolyl-L-prolyl-L-leucyl-L-α-glutamyl-L-arginyl-L-leucyl-L-
threonyl-L-leucinamide (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 15

NA 4 a 6 c 3 g 2 t

NTE

type	location	description
modified base	g-1	5'-ester

SEQ 1 gctcccaggc tcaaa

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:237835

REFERENCE 2: 133:252734

L66 ANSWER 6 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 295810-39-8 REGISTRY

CN DNA, d(G-C-T-C-C-C-A-G-G-C-T-C-A-A-A), (1→5')-ester with
N-[5-[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-
(phosphonoxy)cyclohexyl]amino]ethyl]amino]-2,5-dioxopentyl]glycyl-L-
leucylglycyl-L-isoleucylglycinamide (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 15

NA 4 a 6 c 3 g 2 t
NTE

type	location	description
modified base	g-1	5'-ester

SEQ 1 gctcccaggc tcaaa

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:237835

REFERENCE 2: 133:252734

L66 ANSWER 7 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 294900-80-4 REGISTRY

CN DNA, d(A-G-C-T-C-C-C-A-G-G-C-T-C-A-A), (1→5')-ester with
N-[5-[[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-(
(phosphonoxy)cyclohexyl]amino]ethyl]amino]-2,5-dioxopentyl]glycyl-L-
leucylglycyl-L-isoleucylglycinamide (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 15

NA 4 a 6 c 3 g 2 t

NTE

type	location	description
modified base	a-1	5'-ester

SEQ 1 agctcccagg ctcaa

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:237835

REFERENCE 2: 133:252734

L66 ANSWER 8 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 294900-79-1 REGISTRY

CN L- α -Glutamine, N-[4-[[[(1R)-1-(mercaptomethyl)-2-oxo-2-[[trans-4-(phosphonoxy)cyclohexyl]amino]ethyl]amino]-1,4-dioxobutyl]-L-prolyl-L-threonyl-L-seryl-L-glutaminy-L-seryl-L-arginylglycyl-L- α -aspartyl-L-prolyl-L-threonylglycyl-L-prolyl-L-lysyl-, (1 \rightarrow 5')-ester with DNA d(G-C-T-C-C-C-A-G-G-C-T-C-A-A-A) (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 15

NA 4 a 6 c 3 g 2 t

NTE

type	location	description
modified base	g-1	5'-ester

SEQ 1 gctcccaggc tcaaa

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 134:237835

REFERENCE 2: 133:252734

L66 ANSWER 9 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 229016-44-8 REGISTRY

CN DNA, d([5-[3-[[2-[[3-[4-[(1E,4E,7E,10E,13E,16E,19E,22E,25E,28E)-decamethyl-1,4,7,10,13,16,19,22,25,28-triacontadecaenyl]-5-methyl-2-methoxy-3,6-dioxo-1,4-cyclohexadien-1-yl]-1-oxopropyl]amino]ethyl]amino]-3-oxo-1-propenyl]]U-A-G-T-C-G-G-A-A-G-C-[3'-O-(2-mercaptoethyl)]A) (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 12

NA 4 a 2 c 4 g 1 t 1 u

NTE

type	location	description
modified base	u-1	5-substituted
modified base	a-12	3'-substituted

SEQ 1 uagtcggaag ca

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Patent

RL.P Roles from patents: ANST (Analytical study); USES (Uses)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:69262

L66 ANSWER 10 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
RN 196824-95-0 REGISTRY
CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-C-G-T-C-C-T), complex with DNA
d(A-G-G-A-C-G-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) and DNA
d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(8S,10S)-8-acetyl-10-[(3-amino-2,3,6-
trideoxy- α -L-lyxo-hexopyranosyl)oxy]-5,7,8,9,10,12-hexahydro-6,8,11-
trihydroxy-5,12-dioxo-1-naphthacenyl]oxy]hexyl] hydrogen phosphorothioate]
(1:1:1) (9CI) (CA INDEX NAME)
FS NUCLEIC ACID SEQUENCE
SQL 56,22,22,12
NA 14 a 11 c 8 g 23 t
NTE multistranded (3)
modified

type	location	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagttcttc ttctttcgtc ct

SEQ 1 aggacgaaag aagaagaact tt

SEQ 1 tttcttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

L66 ANSWER 11 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
RN 196824-94-9 REGISTRY
CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-C-G-T-C-C-T), complex with DNA
d(A-G-G-A-C-G-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) and DNA
d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(8S,10S)-8-acetyl-5,7,8,9,10,12-
hexahydro-6,8,10,11-tetrahydroxy-5,12-dioxo-1-naphthacenyl]oxy]hexyl]
hydrogen phosphorothioate] (1:1:1) (9CI) (CA INDEX NAME)
FS NUCLEIC ACID SEQUENCE
SQL 56,22,22,12
NA 14 a 11 c 8 g 23 t
NTE multistranded (3)
modified

type	location	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagttcttc ttctttcgtc ct

SEQ 1 aggacgaaag aagaagaact tt

SEQ 1 tttcttcttc tt

****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

L66 ANSWER 12 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 196824-93-8 REGISTRY

CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-C-G-T-C-C-T), complex with DNA
d(A-G-G-A-C-G-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) and DNA
d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[[(2S,4S)-2-acetyl-1,2,3,4,6,11-
hexahydro-2,4,7,12-tetrahydroxy-6,11-dioxo-5-naphthacenyl]oxy]hexyl]
hydrogen phosphorothioate] (1:1:1) (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 56,22,22,12

NA 14 a 11 c 8 g 23 t

NTE multistranded (3)
modified

type	----- location -----	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagttcttc ttctttcgtc ct

SEQ 1 aggacgaaag aagaagaact tt

SEQ 1 tttcttcttc tt

****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

L66 ANSWER 13 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 196824-81-4 REGISTRY

CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-C-G-T-C-C-T), complex with DNA
d(A-G-G-A-C-G-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) and DNA
d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[[1-O-[(1S,3S)-3-acetyl-1,2,3,4,6,11-
hexahydro-3,5,12-trihydroxy-10-methoxy-6,11-dioxo-1-naphthacenyl]-2,3,6-
trideoxy- α -L-lyxo-hexopyranos-3-yl]amino]-6-oxohexyl] hydrogen
phosphorothioate] (1:1:1) (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE
 SQL 56,22,22,12
 NA 14 a 11 c 8 g 23 t
 NTE multistranded (3)
 modified

type	location	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagtctcttc ttcttttcgtc ct

SEQ 1 aggacgaaag aagaagaact tt

SEQ 1 tttcttcttc tt

****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

L66 ANSWER 14 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 193229-04-8 REGISTRY

CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-G-C-T-C-C-T), complex with deoxyribonucleic acid d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-C-T-T-T) and deoxyribonucleic acid d(T-T-T-C-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(8S,10S)-[8-acetyl-10-(3-amino-2,3,6-trihydroxy- α -L-lyxo-hexopyranosyl)-5,7,8,9,10,12-hexahydro-6,8,11-trihydroxy-5,12-dioxo-1-naphthacenyl]]oxy]hexyl] hydrogen phosphorothioate] (1:1:1) (9CI)
 (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN DNA, d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T), complex with deoxyribonucleic acid d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T) and deoxyribonucleic acid d(T-T-T-C-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(8S,10S)-[8-acetyl-10-(3-amino-2,3,6-trihydroxy- α -L-lyxo-hexopyranosyl)-5,7,8,9,10,12-hexahydro-6,8,11-trihydroxy-5,12-dioxo-1-naphthacenyl]]oxy]hexyl] hydrogen phosphorothioate] (1:1:1) (9CI)

CN DNA, d(T-T-T-C-T-T-C-T-T-C-T-T), 5'-[S-[6-[[(8S,10S)-[8-acetyl-10-(3-amino-2,3,6-trihydroxy- α -L-lyxo-hexopyranosyl)-5,7,8,9,10,12-hexahydro-6,8,11-trihydroxy-5,12-dioxo-1-naphthacenyl]]oxy]hexyl] hydrogen phosphorothioate], complex with deoxyribonucleic acid d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T) and deoxyribonucleic acid d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) (1:1:1) (9CI)

FS NUCLEIC ACID SEQUENCE

SQL 56,22,22,12

NA 14 a 11 c 8 g 23 t

NTE multistranded (3)

modified

type	location	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagttcttc ttctttgctc ct

SEQ 1 aggagcaaag aagaagaact tt

SEQ 1 tttcttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:149343

L66 ANSWER 15 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 193229-03-7 REGISTRY

CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T), complex with deoxyribonucleic acid d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-C-T-T-T) and deoxyribonucleic acid d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(8S,10S) - (8-acetyl-5,7,8,9,10,12-hexahydro-6,8,10,11-tetrahydroxy-5,12-dioxo-1-naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate] (1:1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN DNA, d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T), complex with deoxyribonucleic acid d(A-A-A-G-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T) and deoxyribonucleic acid d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(8S,10S) - (8-acetyl-5,7,8,9,10,12-hexahydro-6,8,10,11-tetrahydroxy-5,12-dioxo-1-naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate] (1:1:1) (9CI)

CN DNA, d(T-T-T-C-T-T-C-T-T-C-T-T), 5'-[S-[6-[[(8S,10S) - (8-acetyl-5,7,8,9,10,12-hexahydro-6,8,10,11-tetrahydroxy-5,12-dioxo-1-naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate], complex with deoxyribonucleic acid d(A-A-A-G-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T) and deoxyribonucleic acid d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) (1:1:1) (9CI)

FS NUCLEIC ACID SEQUENCE

SQL 56,22,22,12

NA 14 a 11 c 8 g 23 t

NTE multistranded (3)
modified

type	location	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagttcttc ttctttgctc ct

SEQ 1 aggagcaaag aagaagaact tt

SEQ 1 tttcttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:149343

L66 ANSWER 16 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 193229-02-6 REGISTRY
 CN DNA, d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T), complex with
 deoxyribonucleic acid d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T) and
 deoxyribonucleic acid d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(2S,4S) - (2-
 acetyl-1,2,3,4,6,11-hexahydro-2,4,7,12-tetrahydroxy-6,11-dioxo-5-
 naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate] (1:1:1) (9CI)
 (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN DNA, d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T), complex with
 deoxyribonucleic acid d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T) and
 deoxyribonucleic acid d(T-T-T-C-T-T-C-T-T-C-T-T) 5'-[S-[6-[[(2S,4S) - (2-
 acetyl-1,2,3,4,6,11-hexahydro-2,4,7,12-tetrahydroxy-6,11-dioxo-5-
 naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate] (1:1:1) (9CI)
 CN DNA, d(T-T-T-C-T-T-C-T-T-C-T-T), 5'-[S-[6-[[(2S,4S) - (2-acetyl-
 1,2,3,4,6,11-hexahydro-2,4,7,12-tetrahydroxy-6,11-dioxo-5-
 naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate], complex with
 deoxyribonucleic acid d(A-A-A-G-T-T-C-T-T-C-T-T-C-T-T-T-G-C-T-C-C-T) and
 deoxyribonucleic acid d(A-G-G-A-G-C-A-A-A-G-A-A-G-A-A-G-A-A-C-T-T-T)
 (1:1:1) (9CI)
 FS NUCLEIC ACID SEQUENCE
 SQL 56,22,22,12
 NA 14 a 11 c 8 g 23 t
 NTE multistranded (3)
 modified

type	location	description
modified base	t-1[3]	5'-ester

SEQ 1 aaagtctctc ttctttgctc ct

SEQ 1 aggagcaaag aagaagaact tt

SEQ 1 tttcttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified
 CI MAN
 SR CA
 LC STN Files: CA, CAPLUS, TOXCENTER
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:149343

L66 ANSWER 17 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 193229-00-4 REGISTRY

CN DNA, d(T-T-T-C-T-T-C-T-T-C-T-T), 5'-[S-[6-[[(8S,10S)-[8-acetyl-10-(3-amino-2,3,6-trihydroxy- α -L-lyxo-hexopyranosyl)-5,7,8,9,10,12-hexahydro-6,8,11-trihydroxy-5,12-dioxo-1-naphthacenyl]]oxy]hexyl] hydrogen phosphorothioate] (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 12

NA 3 c 9 t

NTE

type	location	description
modified base	t-1	5'-ester

SEQ 1 tttctttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

REFERENCE 2: 127:149343

L66 ANSWER 18 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 193228-99-8 REGISTRY

CN DNA, d(T-T-T-C-T-T-C-T-T-C-T-T), 5'-[S-[6-[[(2S,4S)- (2-acetyl-1,2,3,4,6,11-hexahydro-2,4,7,12-tetrahydroxy-6,11-dioxo-5-naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate] (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 12

NA 3 c 9 t

NTE

type	location	description
modified base	t-1	5'-ester

SEQ 1 tttctttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

DR 196824-80-3

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

REFERENCE 2: 127:149343

L66 ANSWER 19 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 193228-98-7 REGISTRY

CN DNA, d(T-T-T-C-T-T-C-T-T-C-T-T), 5'-[S-[6-[[[8S,10S)-(8-acetyl-5,7,8,9,10,12-hexahydro-6,8,10,11-tetrahydroxy-5,12-dioxo-1-naphthacenyl)]oxy]hexyl] hydrogen phosphorothioate] (9CI) (CA INDEX NAME)

FS NUCLEIC ACID SEQUENCE

SQL 12

NA 3 c 9 t

NTE

type	location	description
modified base	t-1	5'-ester

SEQ 1 tttcttcttc tt

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)
2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 127:278418

REFERENCE 2: 127:149343

L66 ANSWER 20 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 175387-32-3 REGISTRY

CN RNA, (A-G-G-A-G-G-A-G-G-A-G-G-A-G-G-A-G-C-G-C-A-A-A-U-G-A-G-A-U-U), 5'-[6-[[4-[[6-[2-[[4-[3-[[2-[[[acetylthio]acetyl]amino]ethyl]amino]-2-[(methylsulfonyl)amino]-3-oxopropyl]phenoxy]acetyl]hydrazino]-6-oxohexyl]amino]-1,4-dioxo-2-butenyl]thio]hexyl hydrogen phosphate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ribonucleic acid, (A-G-G-A-G-G-A-G-G-A-G-G-A-G-G-A-G-C-G-C-A-A-A-U-G-A-G-A-U-U), 5'-[6-[[4-[[6-[2-[[4-[3-[[2-[[[acetylthio]acetyl]amino]ethyl]amino]-2-[(methylsulfonyl)amino]-3-oxopropyl]phenoxy]acetyl]hydrazino]-6-oxohexyl]amino]-1,4-dioxo-2-butenyl]thio]hexyl hydrogen phosphate]

FS NUCLEIC ACID SEQUENCE

SQL 30

NA 11 a 2 c 14 g 3 u

NTE modified

type	location	description
modified base	a-1	5'-ester

SEQ 1 aggaggagga gggagagcgc aaaugagauu

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

DT.CA Caplus document type: Patent

RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 124:254781

L66 ANSWER 21 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 157818-12-7 REGISTRY

CN RNA, (C-A-C-A-C-C-G-A-C-G-G), 5'-[2-[1-(4-amino-2-oxo-1(2H)-pyrimidinyl)-2-oxoethoxy]-3-[[6-[[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)amino]thioxomethyl]hydrazino]-1,6-dioxohexyl]hydrazono]propyl hydrogen phosphate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ribonucleic acid, (C-A-C-A-C-C-G-A-C-G-G), 5'-[2-[1-(4-amino-2-oxo-1(2H)-pyrimidinyl)-2-oxoethoxy]-3-[[6-[[[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl)amino]thioxomethyl]hydrazino]-1,6-dioxohexyl]hydrazono]propyl hydrogen phosphate]

FS NUCLEIC ACID SEQUENCE

SQL 11

NA 3 a 5 c 3 g

NTE modified

type	location	description
modified base	g-11	3'-ester

SEQ 1 cacaccgacg g

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified

CI MAN

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PRP (Properties)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 121:173214

L66 ANSWER 22 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 154804-75-8 REGISTRY

CN DNA, d(A-C-C-C-C-A-G-C-T-C-A-G-C-T-C), 5'-[6-[[4-[[[(3β,5β,12β,14β)-21,23-epoxy-12,14-dihydroxy-23-oxo-24-norcholesterol-20(22)-en-3-yl]oxy]-1,4-dioxobutyl]thio]hexyl hydrogen phosphate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 24-Norcholane, deoxyribonucleic acid deriv.
CN Deoxyribonucleic acid, d(A-C-C-C-C-A-G-C-T-C-A-G-C-T-C),
5'-[6-[[4-[[[(3 β ,5 β ,12 β ,14 β)-21,23-epoxy-12,14-
dihydroxy-23-oxo-24-norchol-20(22)-en-3-yl]oxy]-1,4-dioxobutyl]thio]hexyl
hydrogen phosphate]
FS NUCLEIC ACID SEQUENCE
SQL 15
NA 3 a 8 c 2 g 2 t
NTE

type	----- location -----	description
modified base	a-1	5'-ester

SEQ 1 accccagctc agctc

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS
DT.CA Caplus document type: Journal
RL.NP Roles from non-patents: PREP (Preparation)
1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:271031

L66 ANSWER 23 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
RN 154804-74-7 REGISTRY
CN DNA, d(A-A-C-G-T-T-G-A-G-G-G-G-C-A-T), 5'-[6-[[4-
[[[(3 β ,5 β ,12 β ,14 β)-21,23-epoxy-12,14-dihydroxy-23-oxo-
24-norchol-20(22)-en-3-yl]oxy]-1,4-dioxobutyl]thio]hexyl hydrogen
phosphate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 24-Norcholane, deoxyribonucleic acid deriv.
CN Deoxyribonucleic acid, d(A-A-C-G-T-T-G-A-G-G-G-G-C-A-T),
5'-[6-[[4-[[[(3 β ,5 β ,12 β ,14 β)-21,23-epoxy-12,14-
dihydroxy-23-oxo-24-norchol-20(22)-en-3-yl]oxy]-1,4-dioxobutyl]thio]hexyl
hydrogen phosphate]
FS NUCLEIC ACID SEQUENCE
SQL 15
NA 4 a 2 c 6 g 3 t
NTE

type	----- location -----	description
modified base	a-1	5'-ester

SEQ 1 aacgttgagg ggcac

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF Unspecified
CI MAN
SR CA
LC STN Files: CA, CAPLUS
DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 120:271031

L66 ANSWER 24 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 141706-81-2 REGISTRY

CN DNA, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A),
 5'-[hydrogen [2-[[4-[[4-[7-(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate], complex
 with DNA d(T-A-A-T-G-A-G-T-G-A-G-C-T-A-A-C-T-C-A-C-A-T-T-A-A-T) (1:1)
 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Deoxyribonucleic acid, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A), 5'-[hydrogen [2-[[4-[[4-[7-(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate], complex with deoxyribonucleic acid d(T-A-A-T-G-A-G-T-G-A-G-C-T-A-A-C-T-C-A-C-A-T-T-A-A-T) (1:1)

CN DNA, d(T-A-A-T-G-A-G-T-G-A-G-C-T-A-A-C-T-C-A-C-A-T-T-A-A-T), complex
 with DNA d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A)
 5'-[hydrogen [2-[[4-[[4-[7-(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate] (1:1)
 (9CI)

FS NUCLEIC ACID SEQUENCE

SQL 52,26,26

NA 18 a 8 c 8 g 18 t

NTE multistranded (2)
 modified

type	location	description
modified base	t-1[2]	5'-phosphoramidate

SEQ 1 attaatgtga gttagctcac tcatta

SEQ 1 taatgagtga gctaactcac attaat

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C282 H351 N95 O162 P26 S . C256 H321 N98 O152 P25

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 141639-23-8

CMF C256 H321 N98 O152 P25

CCI MAN

CM 2

CRN 141634-63-1

CMF C282 H351 N95 O162 P26 S

CCI MAN

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 117:2110

L66 ANSWER 25 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 141706-80-1 REGISTRY

CN DNA, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A),
5'-[hydrogen [2-[[4-[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-
[9H]xanthen]-5-yl)amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate],
complex with DNA d(T-A-A-T-G-A-G-T-G-A-G-C-T-A-A-C-T-C-A-C-A-T-T-A-A-T)
(1:1) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Deoxyribonucleic acid, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-
A-T-T-A), 5'-[hydrogen [2-[[4-[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-
1(3H),9'-[9H]xanthen]-5-yl)amino]-1,4-dioxo-2-
butenyl]thio]ethyl]phosphoramidate], complex with deoxyribonucleic acid
d(T-A-A-T-G-A-G-T-G-A-G-C-T-A-A-C-T-C-A-C-A-T-T-A-A-T) (1:1)

CN DNA, d(T-A-A-T-G-A-G-T-G-A-G-C-T-A-A-C-T-C-A-C-A-T-T-A-A-T), complex
with DNA d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A)
5'-[hydrogen [2-[[4-[(3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-
[9H]xanthen]-5-yl)amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate]
(1:1) (9CI)

CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene], deoxyribonucleic acid deriv.

FS NUCLEIC ACID SEQUENCE

SQL 52,26,26

NA 18 a 8 c 8 g 18 t

NTE multistranded (2)
modified

type	----- location -----	description
modified base	a-1	5'-phosphoramidate

SEQ 1 attaatgtga gttagctcac tcatta

SEQ 1 taatgagtga gctaactcac atta

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C282 H342 N94 O165 P26 S . C256 H321 N98 O152 P25

SR CA

LC STN Files: CA, CAPLUS

DT.CA Caplus document type: Journal

RL.NP Roles from non-patents: PRP (Properties)

CM 1

CRN 141639-23-8

CMF C256 H321 N98 O152 P25

CCI MAN

CM 2

CRN 141634-62-0

CMF C282 H342 N94 O165 P26 S

CCI MAN

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 117:2110

L66 ANSWER 26 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 141634-63-1 REGISTRY
 CN DNA, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A),
 5'-[hydrogen [2-[[4-[[4-[7-(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate] (9CI)
 (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Deoxyribonucleic acid, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A), 5'-[hydrogen [2-[[4-[[4-[7-(diethylamino)-4-methyl-2-oxo-2H-1-benzopyran-3-yl]phenyl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate]
 FS NUCLEIC ACID SEQUENCE
 SQL 26
 NA 8 a 4 c 4 g 10 t
 NTE

type	location	description
modified base	a-1	5'-phosphoramidate

SEQ 1 attaatgtga gttagctcac tcatta

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C282 H351 N95 O162 P26 S
 CI COM, MAN
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PRP (Properties)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 117:2110

L66 ANSWER 27 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 141634-62-0 REGISTRY
 CN DNA, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A),
 5'-[hydrogen [2-[[4-[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate] (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Deoxyribonucleic acid, d(A-T-T-A-A-T-G-T-G-A-G-T-T-A-G-C-T-C-A-C-T-C-A-T-T-A), 5'-[hydrogen [2-[[4-[[3',6'-dihydroxy-3-oxospiro[isobenzofuran-1(3H),9'-[9H]xanthen]-5-yl]amino]-1,4-dioxo-2-butenyl]thio]ethyl]phosphoramidate]
 CN Spiro[isobenzofuran-1(3H),9'-[9H]xanthene], deoxyribonucleic acid deriv.
 FS NUCLEIC ACID SEQUENCE
 SQL 26
 NA 8 a 4 c 4 g 10 t
 NTE

type	location	description
modified base	a-1	5'-phosphoramidate

SEQ 1 attaatgtga gttagctcac tcatta

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C282 H342 N94 O165 P26 S

CI COM, MAN
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PRP (Properties)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 117:2110

L66 ANSWER 28 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 140698-22-2 REGISTRY
 CN Cytidine, 2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-
 (3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyadenylyl-
 (3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxycytidylyl-
 (3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxyadenylyl-
 (3'→5')-2'-deoxycytidylyl-(3'→5')-2'-deoxyguanylyl-
 (3'→5')-2'-deoxyguanylyl-(3'→5')-2'-deoxy-,
 3'-[S-[6-[[1-O-(3-acetyl-1,2,3,4,6,11-hexahydro-3,5,12-trihydroxy-10-
 methoxy-6,11-dioxo-1-naphthacenyl)-2,3,6-trideoxy-α-L-lyxo-
 hexopyranos-3-yl]amino]-6-oxohexyl] hydrogen phosphorothioate], (1S-cis)-
 (9CI) (CA INDEX NAME)
 FS NUCLEIC ACID SEQUENCE
 SQL 12
 NA 3 a 6 c 3 g
 NTE

type	location	description
modified base	c-12	3'-ester

SEQ 1 cacaccgacg gc

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C147 H183 N49 O80 P12 S
 CI MAN
 SR CA
 LC STN Files: CA, CAPLUS
 DT.CA Caplus document type: Journal
 RL.NP Roles from non-patents: PREP (Preparation)
 1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:194779

L66 ANSWER 29 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN
 RN 140698-20-0 REGISTRY
 CN Thymidine, thymidylyl-(3'→5')-thymidylyl-(3'→5')-
 thymidylyl-(3'→5')-2'-deoxycytidylyl-(3'→5')-2'-
 deoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-2'-deoxycytidylyl-
 (3'→5')-2'-deoxycytidylyl-(3'→5')-thymidylyl-(3'→5')-
 2'-deoxycytidylyl-(3'→5')-, 3'-[S-[6-[[1-O-(3-acetyl-1,2,3,4,6,11-
 hexahydro-3,5,12-trihydroxy-10-methoxy-6,11-dioxo-1-naphthacenyl)-2,3,6-
 trideoxy-α-L-lyxo-hexopyranos-3-yl]amino]-6-oxohexyl] hydrogen
 phosphorothioate], (1S-cis)- (9CI) (CA INDEX NAME)
 FS NUCLEIC ACID SEQUENCE
 SQL 11
 NA 5 c 6 t
 NTE

type	location	description
modified base	t-11	3'-ester

SEQ 1 tttcctcctc t

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C138 H177 N28 O83 P11 S

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA CPlus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 116:194779

L66 ANSWER 30 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 124540-09-6 REGISTRY

CN DNA, d(P-thio) (T-C-G-T-C-G-C-T-G-T-C-T-C-C-G-C-T-T-C-T-T-C-C-T-G-C-C-A), 5'-[[2-[4-(9,10-dihydro-9,10-dioxo-1-anthracenyl)-1-piperazinyl]ethyl] methyl phosphate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Deoxyribonucleic acid, d(P-thio) (T-C-G-T-C-G-C-T-G-T-C-T-C-C-G-C-T-T-C-T-T-C-C-T-G-C-C-A), 5'-[[2-[4-(9,10-dihydro-9,10-dioxo-1-anthracenyl)-1-piperazinyl]ethyl] methyl phosphate]

FS NUCLEIC ACID SEQUENCE

SQL 28

NA 1 a 12 c 5 g 10 t

NTE

type	location	description
modified base	t-1	5'-ester
modified link	t-1 - c-2	P-thio
modified link	c-2 - g-3	P-thio
modified link	g-3 - t-4	P-thio
modified link	t-4 - c-5	P-thio
modified link	c-5 - g-6	P-thio
modified link	g-6 - c-7	P-thio
modified link	c-7 - t-8	P-thio
modified link	t-8 - g-9	P-thio
modified link	g-9 - t-10	P-thio
modified link	t-10 - c-11	P-thio
modified link	c-11 - t-12	P-thio
modified link	t-12 - c-13	P-thio
modified link	c-13 - c-14	P-thio
modified link	c-14 - g-15	P-thio
modified link	g-15 - c-16	P-thio
modified link	c-16 - t-17	P-thio
modified link	t-17 - t-18	P-thio
modified link	t-18 - c-19	P-thio
modified link	c-19 - t-20	P-thio
modified link	t-20 - t-21	P-thio
modified link	t-21 - c-22	P-thio
modified link	c-22 - c-23	P-thio
modified link	c-23 - t-24	P-thio

modified link	t-24	- g-25	P-thio
modified link	g-25	- c-26	P-thio
modified link	c-26	- c-27	P-thio
modified link	c-27	- a-28	P-thio

SEQ 1 tcgtcgtgt ctccgcttct tcctgcc

****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

MF C289 H368 N88 O153 P28 S27

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Patent

RL.P Roles from patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 112:77868

L66 ANSWER 31 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 122635-46-5 REGISTRY

CN DNA, d(P-thio) (T-C-G-T-C-G-C-T-G-T-C-T-C-C-G-C-T-T-C-T-T-C-C-T-G-C-C-A), 5'-[O-(9,10-dihydro-9,10-dioxo-1-anthracenyl) hydrogen phosphorothioate] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Deoxyribonucleic acid, d(P-thio) (T-C-G-T-C-G-C-T-G-T-C-T-C-C-G-C-T-T-C-T-T-C-C-T-G-C-C-A), 5'-[O-(9,10-dihydro-9,10-dioxo-1-anthracenyl) hydrogen phosphorothioate]

OTHER NAMES:

CN Deoxyribonucleic acid, d(T-sp-C-sp-G-sp-T-sp-C-sp-G-sp-C-sp-T-sp-G-sp-T-sp-C-sp-T-sp-C-sp-G-sp-C-sp-T-sp-T-sp-C-sp-T-sp-T-sp-C-sp-C-sp-T-sp-G-sp-C-sp-C-sp-A), 5'-[O-(9,10-dihydro-9,10-dioxo-1-anthracenyl) hydrogen phosphorothioate]

FS NUCLEIC ACID SEQUENCE

SQL 28

NA 1 a 12 c 5 g 10 t

NTE

type	----- location -----	description
modified base	t-1	5'-ester
modified link	t-1 - c-2	P-thio
modified link	c-2 - g-3	P-thio
modified link	g-3 - t-4	P-thio
modified link	t-4 - c-5	P-thio
modified link	c-5 - g-6	P-thio
modified link	g-6 - c-7	P-thio
modified link	c-7 - t-8	P-thio
modified link	t-8 - g-9	P-thio
modified link	g-9 - t-10	P-thio
modified link	t-10 - c-11	P-thio
modified link	c-11 - t-12	P-thio
modified link	t-12 - c-13	P-thio
modified link	c-13 - c-14	P-thio
modified link	c-14 - g-15	P-thio
modified link	g-15 - c-16	P-thio
modified link	c-16 - t-17	P-thio
modified link	t-17 - t-18	P-thio
modified link	t-18 - c-19	P-thio

modified link	c-19	-	t-20	P-thio
modified link	t-20	-	t-21	P-thio
modified link	t-21	-	c-22	P-thio
modified link	c-22	-	c-23	P-thio
modified link	c-23	-	t-24	P-thio
modified link	t-24	-	g-25	P-thio
modified link	g-25	-	c-26	P-thio
modified link	c-26	-	c-27	P-thio
modified link	c-27	-	a-28	P-thio

SEQ 1 tcgtcgctgt ctccgcttct tcttgcca

RELATED SEQUENCES AVAILABLE WITH SEQLINK

MF C282 H354 N86 O152 P28 S28

CI MAN

SR CA

LC STN Files: CA, CAPLUS

DT.CA CAplus document type: Journal

RL.NP Roles from non-patents: PREP (Preparation)

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:126495

L66 ANSWER 32 OF 33 REGISTRY COPYRIGHT 2006 ACS on STN

RN 122635-20-5 REGISTRY

[illegible]

FS NUCLEIC ACID SEQUENCE

SQL 12

NA 12 t

NTE

type	location	description
modified base	t-1	5'-ester
modified link	t-1 - t-2	P-thio
modified link	t-2 - t-3	P-thio
modified link	t-3 - t-4	P-thio
modified link	t-4 - t-5	P-thio
modified link	t-5 - t-6	P-thio
modified link	t-6 - t-7	P-thio
modified link	t-7 - t-8	P-thio
modified link	t-8 - t-9	P-thio
modified link	t-9 - t-10	P-thio
modified link	t-10 - t-11	P-thio
modified link	t-11 - t-12	P-thio

```
SEQ      1 tttttttttttt tt
```

****RELATED SEQUENCES AVAILABLE WITH SEOLINK****

MF C140 H177 N25 O75 P12 S12

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L66  ANSWER 33 OF 33  REGISTRY  COPYRIGHT 2006 ACS on STN
RN    122635-18-1  REGISTRY
CN    Thymidine, 5'-O-[[2-[4-(9,10-dihydro-9,10-dioxo-1-anthracenyl)-1-
      piperazinyl]ethoxy]mercaptophosphinyl]thymidylyl-(3'→5')-P-
      thiothymidylyl-(3'→5')-P-thiothymidylyl-(3'→5')-P-
      thiothymidylyl-(3'→5')-P-thiothymidylyl-(3'→5')-P-
      thiothymidylyl-(3'→5')-P-thiothymidylyl-(3'→5')-P-
      thiothymidylyl-(3'→5')-P-thiothymidylyl-(3'→5')-P-
      thiothymidylyl-(3'→5')-P-thiothymidylyl-(3'→5')- (9CI)
      (CA INDEX NAME)
FS    NUCLEIC ACID SEQUENCE
SQL   12
NA    12 t
NTE
```

type	location	description
modified base	t-1	5'-ester
modified link	t-1 - t-2	P-thio
modified link	t-2 - t-3	P-thio
modified link	t-3 - t-4	P-thio
modified link	t-4 - t-5	P-thio
modified link	t-5 - t-6	P-thio
modified link	t-6 - t-7	P-thio
modified link	t-7 - t-8	P-thio
modified link	t-8 - t-9	P-thio
modified link	t-9 - t-10	P-thio
modified link	t-10 - t-11	P-thio
modified link	t-11 - t-12	P-thio

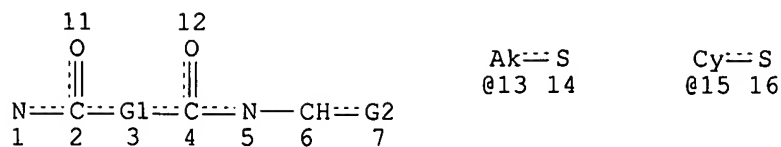
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SEQ      1 tttttttttttt tt
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****RELATED SEQUENCES AVAILABLE WITH SEQLINK****

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MF      C140 H176 N26 O75 P12 S12
CI      MAN
SR      CA
LC      STN Files:   CA, CAPLUS
DT.CA   CApus document type:  Journal
RL.NP   Roles from non-patents:  PREP (Preparation)
              1 REFERENCES IN FILE CA (1907 TO DATE)
              1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
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REFERENCE 1: 111:126495

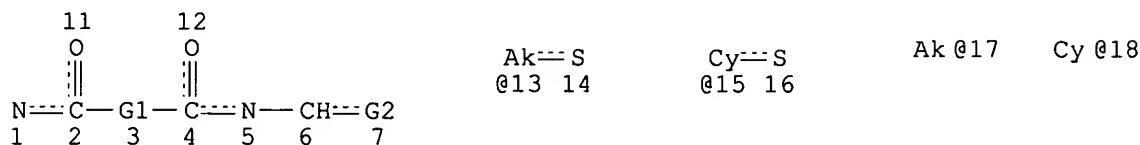
=> => d sta que 134
L26 STR



VAR G1=AK/CY
VAR G2=13/15
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE
L28 35593 SEA FILE=REGISTRY SSS FUL L26
L32 STR



VAR G1=17/18
VAR G2=13/15
NODE ATTRIBUTES:
CONNECT IS E1 RC AT 14
CONNECT IS E1 RC AT 16
CONNECT IS E2 RC AT 17
CONNECT IS E2 RC AT 18
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE
L34 199 SEA FILE=REGISTRY SUB=L28 SSS FUL L32

100.0% PROCESSED 35593 ITERATIONS
SEARCH TIME: 00.00.04

199 ANSWERS

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